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THE HEALTH MAGAZINE

THE AMERICAN MEDICAL ASSOCIATION

HYGEIA

JULY

1943 - 25c

FIRST AID
O. Nichols Jr., M.D.

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FINGERS and FLIES
oseph Felsen, M.D.

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L ELECTRIFICATION
COMMUNITY HEALTH
y Harry Slattery

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NGENITAL HEART
DISEASE
obert H. Feldt, M.D.

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mes W. Smith, M.D.

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bert S. Goodhart, M.D.

COMPOUND INTEREST W

and, after her twentieth birthday, you

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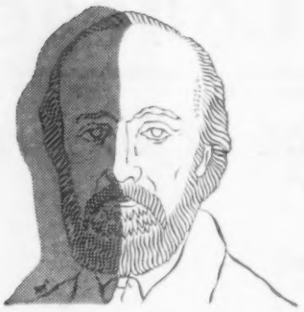
CARL WUNDERLICH



1815-1877

Founder of clinical thermometry

hygeia

THE HEALTH MAGAZINE

535 N. DEARBORN ST., CHICAGO, ILL.

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JULY

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Unsolicited manuscripts will be considered by the Editor but must be accompanied by a stamped self addressed envelop to insure return if rejected. Manuscripts should be typewritten, double-spaced, and the original, not the carbon copy, submitted. All rights reserved.

What can a man believe in?

This girl volunteered for a job that is not without peril.

From a deadly virus she prepares vaccine that protects our fighting men from typhus—the dreadful plague that can cut down an army quicker than bullets or bombs.

She works in an isolated laboratory. She is protected by every safeguard of modern science. Yet she knows she cannot be wholly safe.

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Who's Who IN HYGEIA

Fellow officers in the Medical Corps, U. S. Army, describe COLONEL W. LEE HART as "gracious, affable, having a keen sense of humor, always tolerant of new ideas—and always ready for a lively argument about questions of medico-military policy on sanitation, nutrition, venereal disease control or hospital construction and operation." Col. Hart came by his knowledge of these and other medical-military affairs the hard way—he's been an army doctor for thirty-five years, practically ever since he was graduated from the University of Maryland School of Medicine in 1906. Today, he is chief medical officer of the Eighth Service Command, an area which includes New Mexico, Texas, Oklahoma, Arkansas and Louisiana. The total strength of the armed forces in the Eighth Service Command is a military secret, but millions of Americans know by now that most of our fighting men spend at least a part of their training period in one or another of the Command's hundreds of camps. While he's on a post in the Eighth Command, the soldier's health is Col. Hart's responsibility—the medical, nutritional and sanitary facilities of every Army establishment in the area are his concern. Selecting a stray fact from a wealth of evidence that Col. Hart is on the job, it can be pointed out that the average soldier gains from eight to ten pounds in weight during his period of training.

During World War I, Col. Hart worked with the Pullman Company in developing the "hospital train" which was used successfully in combat areas later in the war. Then he was assigned to the Surgeon General's office as chief of the overseas division, and, later, he was transferred to duty with the A. E. F. and became Port Surgeon at Antwerp, Belgium, a post which he held until the close of the war and throughout the U. S. occupation after the armistice.

As all army officers must, Col. Hart has himself spent a certain amount of time in training. He has been graduated from, among others, the Army Medical College (1908), the Command and General Staff School (1926), the Army Industrial College (1927), and the Army War College (1931). He has been decorated by the governments of Bolivia, Equador, Serbia, Poland, France, Montenegro and Panama. During a tour of duty in the Philippine Islands he carried on extensive research in tropical diseases, and his latest scientific achievement is a new type of evaporative cooler which he invented as a result of experiments carried on at odd moments of relaxation from administrative duties.

Turn to page 488 of this issue of HYGEIA, "Social Hygiene in War and Peace," and read Col. Hart's own description of how the Eighth Service Command has attacked venereal disease from all sides at once.

ROBERT H. FELDT, M.D. ("Babies Born with Heart Trouble," page 494), is a practicing physician in Milwaukee, Wis., a member of the cardiac clinic at Milwaukee Children's Hospital, assistant medical director of the Northwestern Mutual Life Insurance Co. and an associate preceptor to the University of Wisconsin Medical School. Dr. Feldt was graduated from Northwestern University Medical School in 1934 and served internships at the Wesley Memorial and Cook County

(Continued on page 482)

When your doctor needs the scientific facts . . .

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The facilities of the medical laboratory are indispensable to your doctor for obtaining much of the information he needs to know about your condition. But laboratory procedures are often so highly specialized and so time-consuming that, in most instances, he delegates to the medical technician the work of making chemical analyses, microscopic examinations and special tests.

The medical technician, for example, makes analyses of the blood and other body fluids for him. She grows the cultures which enable him to determine whether bacteria are responsible for a disease. With equal skill she takes electrical tracings of the action of the heart, determines rates of metabolism and identifies blood types.

These are but a few of the many highly developed skills which make the medical technician invaluable to your doctor. Through these skills all the resources of the medical laboratory are readily available to him for the benefit of all his patients.

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IT TAKES MONEY TO WIN—BUY WAR BONDS AND STAMPS

LETTERS FROM *Readers*

Questions and Answers

To the Editor:

Knowing that you welcome all criticism, may I suggest that, as a layman, I am not so much interested in the stories as in the questions and answers. Lately, however, you seem to have very few of them.

JOHN L. SCHOENFELD
New York City

Helps Out

To the Editor:

I most certainly enjoy reading HYGEIA, and it helps me out a great deal in regard to my son's health, also my own and those around me.

M. CORDELL
Hollywood, Fla.

For Twenty Years

To the Editor:

Mrs. Insull and I have been continuous subscribers to HYGEIA ever since we were married, twenty years ago, and have not only enjoyed reading the magazine but have found the articles of immense educational value in caring for the health and development of our family.

WILLIAM INSULL
Bowling Green, Ohio

Wants More Detail

To the Editor:

As a reader of HYGEIA, I would like to offer the following as my reaction to it. Having a keen interest in the health problems of today just as a matter of practical knowledge and having taken first aid and home nursing as well as reading many articles from medical journals, I would like to write this letter.

I think the subjects chosen are always very interesting, but I don't think you go into enough detail. Usually you give some slight historical background and then state figures as to the present day problem. Being more or less amateurish in any knowledge that I might impart to any one on the subject of health, I find that the articles don't have enough corrective material in them. These are days when the people are being educated in not calling the doctor unless it is dire. Therefore, I think more concrete articles on first aid, how to give a patient a bath, and what are the danger signs in illness are things we should all be aware of.

MARIE BAGGOTT
Cleveland, Ohio

Suggested Reading

To the Editor:

You may be pleased to learn that in the workbook we are using much of the "Interesting Reading" suggested for the chapters we are studying is taken from HYGEIA. The student-teachers find the articles not only interesting but very beneficial.

SISTER MARGARET
Emmanuel College
Boston, Mass.

Home Nursing

To the Editor:

I should like to voice the sentiment of Miss Edith Mack in her recent letter to the editor. I too, would appreciate more articles on home nursing to be used as reference work in my classes. At present, every member of my class subscribes to HYGEIA, and such articles would be quite helpful.

W. LOUISE KECHERT, R.N.
State Teachers College,
West Liberty, W. Va.

Another article on home nursing is scheduled for an early issue.—ED.

Family Life

To the Editor:

I am attaching a clipping from our paper which appeared in Mrs. Edyth T. Wallace's "Our Homes" column:

" 'Wholesome family life doesn't just happen—rather, it is the sum of the interrelationships of all the members of the family.'

"The foregoing is from a picture caption in the March number of HYGEIA, The Health Magazine. This magazine's increasing interest in family relationships and their influence upon physical and mental health is extremely gratifying to those of us who are interested in the encouragement of wholesome family life.

"The 'sum of the interrelationships of all the members of the family' will include the relationship between mother and father, between each of them and the individual children, and that which exists between the children themselves. In other words, it embraces the husband-wife relationship, the parent-child relationship, and the child-child relationships existing in the family group.

"A wholesome husband-wife relationship does not necessarily require complete agreement on all subjects, but it does require a willingness to allow the other person freedom to hold differing opinions, an open mind making one willing to study and change his beliefs, the ability to give as well as take, and the adjustability to meet the marriage partner even more than half way when occasion requires.

"A wholesome parent-child relationship is one which gradually changes as children grow from dependency on the children's part and protection and direction on the part

(Continued on page 482)

Some sun glasses can be worse than the sun!

Glare is bad—but some cures are worse. Some sun glasses can do more harm than the glare you want to avoid.

If you wear glasses every day, then certainly the darker shade you want for summer wear should be prescription-ground for you. And if you don't usually wear glasses—there's all the more reason to be careful! Don't risk your eyes with "counter card" goggles.

Ordinary *blown* or *pressed* sun glass lenses may contain minute optical imperfections which distort your vision—force your eyes to unaccustomed strain—may actually impair your sight. Avoid them!

The safest rule—for complete protection of your eyes from glare, from strain, from future trouble—is to ask for sun glasses with optical quality lenses—and buy them in a reputable optical establishment.

ASK FOR SPORT SHADE SOFT-LITE LENSES

Sport Shade Soft-Lite Lenses are ideal for Summer wear—just as the lighter shades are for every day use. They are made by Bausch & Lomb of highest quality ophthalmic glass. Three densities scientifically control the amount of light that reaches your eyes. They protect your eyes from sun and glare without changing color values. Sport Shade Soft-Lite Lenses may be ground to your prescription or plano (no correction). They may be fitted in any style of frame you choose.

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UNCLE SAM AGAINST CANCER

By R. R. SPENCER, M.D.

In two illuminating articles, the medical director of the United States Public Health Service National Cancer Institute summarizes progress against dreaded cancer.

HOME CANNED FOODS AND BOTULISM

By THOMAS G. HULL, Ph.D.

With thousands of Americans planning to preserve home grown fruits and vegetables this year, the dangerous botulinum bacillus—twenty times as powerful as cobra venom—must be eliminated by rigid precautionary measures. Dr. Hull tells what they are.

BABY BUSINESS

By MARJORIE LEE JOSEPH and NANETTE KRAMER

The story of Dr. Joseph B. De Lee and the Mothers' Aid of the Chicago Lying-In Hospital.

DIETITIANS' AIDE CORPS

By BETTY ECKERSALL

The American Red Cross is meeting another crisis: the shortage of trained dietitians in hospitals and institutions. Miss Eckersall describes the program of this newest army of volunteer war workers.

REFILLS FOR HEALTH

By EMMA H. LAWTON

Today, 50 to 80 per cent of tuberculosis patients in first class sanatoriums are receiving pneumothorax—the treatment which actually rests the infected lung. Miss Lawton explains what it is and why it works.

FORGOTTEN CHILDREN—SPASTICS

By RICHARD E. CRAIGLOW

Victims of cerebral palsy—spastic paralysis—are set apart by the pity their condition arouses. Yet they can lead useful lives, Mr. Craiglow says, and what they need is not pity but opportunity.

AIR RAIDS AND MENTAL HEALTH

By MARGARET A. THOMAS

Britain's Mental Health Emergency Committee found out what air raids do to mental health—and how to handle the problem.

THE FOOD WE EAT

By MIRIAM ZELLER GROSS

Mrs. Gross presents the vitamins in another fact-packed article in the series of nutrition studies.

Also: Interesting, informative articles on the health of our fighting forces, industrial medicine, infant care, public health, nutrition and other health topics of the day.

To everyone who has a Boy— or knows one!

THE WHOLE COUNTRY is being asked to buy War Bonds and help give our fighting men the planes, guns, bullets, and tanks they must have.

But there is another reason for buying War Bonds, one which you seldom hear.

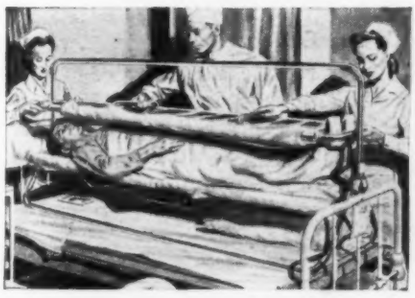
War Bonds will buy not only weapons to kill the enemy but also weapons to save our own boys' lives.

If your boy, or any boy, is injured in battle, he's going to get the best surgical care in the world; X-rays, sterile operating rooms, a staff of skilled surgeons, everything he'd get in the finest hospitals at home. This type of modern, mobile equipment costs a mint of money.

Such equipment will help the doctors and nurses give today's fighter a better chance of survival in this war than any fighter has ever had in any other war. And you can help Uncle Sam give your boy this chance by buying War Bonds.

So say to yourself, "Maybe I should dig even deeper into my pocket . . . maybe I should give even more than the 10 per cent of my earnings I'm already giving."

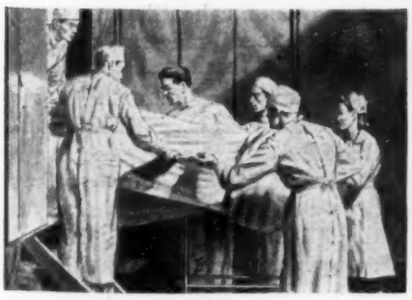
That boy of yours, or the boy you know, is willingly taking a chance to save the things we all believe in. Why not help that chance along?



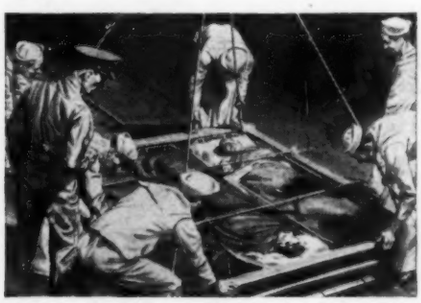
TRAINING AND MAINTAINING Navy nurses and pharmacist's mates takes many thousands of dollars. Approximately $66 per month is needed to house and feed each nurse. 42 civilians each investing $18.75 in a $25 War Bond will support a nurse for a year.

THIS ARMY REFRIGERATED TEST CHAMBER is part of the equipment the Army must have to help our flyers fly higher than the enemy. 645 civilians, each buying one $25 War Bond, could pay for the installation and accessories of this life-saving equipment.

THE WAND-LIKE ROD in the surgeon's hand is a metal locator. It first proved its worth at Pearl Harbor in finding hidden shell fragments. Buying 1856 $25 War Bonds will pay for 100 metal locators to save injured sailors' lives.



THESE MOBILE HOSPITALS bring medical and surgical care right up behind the lines. They save precious time and lives. Will you join just *one other civilian* and help Uncle Sam maintain just *one* mobile unit for *one* day by buying *one* $25 War Bond apiece?



THIS STOKES STRETCHER is a life-saving device for transporting severely injured men. The Navy uses hundreds of these stretchers. One person, buying just *two* $25 War Bonds and $14 worth of War Stamps, provides the Navy one Stokes stretcher. Are you that person?

TANK COMBAT IS TOUGH on men inside the tanks. Army doctors, aided by a $300,000 laboratory at Fort Knox, are studying how to help them stand up under tank combat conditions. 16,000 people each buying one $25 War Bond will pay for this laboratory.

You've done your bit—now do your best!

Boost your bond buying through the payroll savings plan

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USE FRESH AND STAY FRESHER!
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Three sizes
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Guaranteed by Good Housekeeping
NEW DOUBLE-DUTY CREAM • REALLY STOPS PERSPIRATION • PREVENTS ODOR

Letters from Readers

(Continued from page 478)

of the parents to a relationship more nearly on a basis of friendly companionship. A friendly child-child relationship can develop only as children learn to accept the truths of individual differences and the equal worth of differing abilities, and as they learn to respect the personal and property rights of others.

"All this does not just happen—neither is perfection ever attained; but these relationships which contribute to wholesome family life are goals well worth our most intelligent efforts."

JULIA MARLOWE

The Daily Oklahoman,
Oklahoma City, Okla.

Too Technical

To the Editor:

I appreciate the copy of HYGEIA, and I enjoyed parts of it. However, if I might venture a criticism, many of the articles are too technical for the average layman.

MRS. C. B. UTTLEY

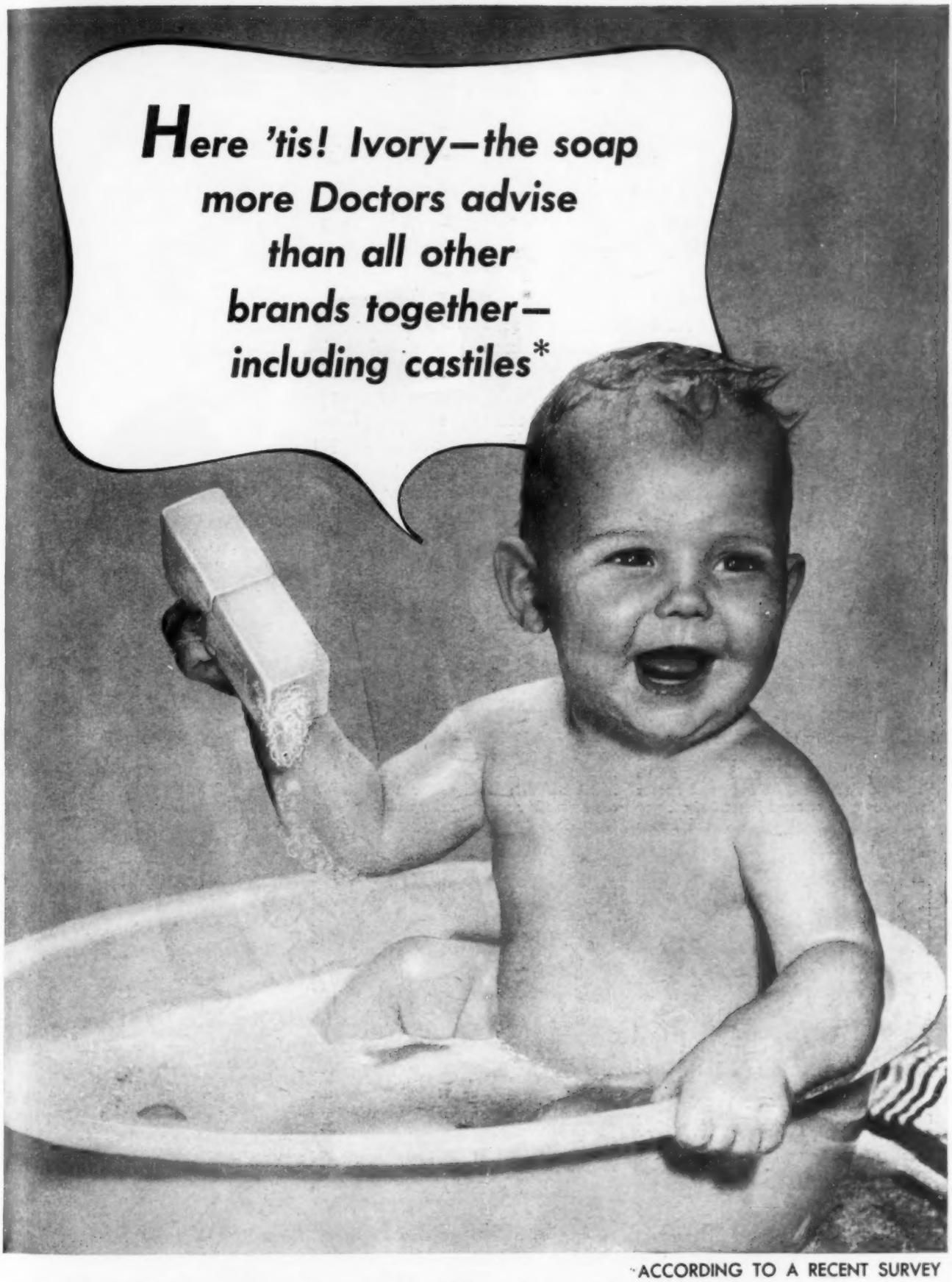
St. Louis, Mo.

Who's Who

(Continued from page 476)

hospitals, Chicago. He has contributed scientific papers to a number of professional journals and has written popular health articles for several national magazines.

Among the other HYGEIA authors this month: E. O. NICHOLS JR., M.D., is surgeon and gynecologist on the staff of the Plainview Sanitarium and Clinic, Plainview, Tex.; ROBERT S. GOODHART, M.D., is technical adviser on nutrition in industry, War Food Administration, Washington, D. C.; HARRY SLATTERY is Rural Electrification Administrator for the United States Department of Agriculture; JAMES W. SMITH, M.D., is on the staffs of the New York and Columbia university medical schools; JOSEPH FELSEN, M.D., is director of laboratories and research at the Bronx Hospital, New York City; and MEYER WIENER, M.D., is an honorary medical consultant to the U. S. Navy in Coronado, Calif.



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RATTLES, PACIFIERS and TEETHERS

An Editorial

By MORRIS FISHBEIN

THE EXIGENCIES of war force extraordinary limitations on the materials of existence which affect the intimate lives of all of us. No other group in the population has been so concerned by these restrictions, however, as have the infantile Americans—age group four years and under! There are so many more of them and they came so suddenly. The need for essential metals deprived them for a while of scales on which their weights might be recorded. The suggestion was made that the lessened activity in the butcher shops would give opportunity for the anxious mother to carry the infant, at least once every three days, to the meat emporium. There the kindly butcher might cooperate in lending the scales for a recording of infantile avoirdupois. This procedure would, of course, be accomplished without the casual resting of the hand or elbow on the tray which occasionally accompanies the weighing of sides of beef and loins of pork.

The need for rubber on treads of tanks and trucks restricted considerably the use of this material for the nipples of nursing bottles and for the water-proof vestments which encompass the infant's nethermost parts. Another recent casualty includes those aids to maternal sanity known as rattles, pacifiers and teethers. When the shortage became apparent, petitions for relief poured into the War Production Board. The question was referred to the Committee on Drugs and Medical Supplies of the Division of Medical Sciences of the National Research Council. This erudite body of scientists conducted a survey among leading pediatricians who were requested to indicate whether or not these time tried soothing devices were essential to the health program to the extent of: (a) being practically indispensable; (b) not indispensable but highly desirable, if available; or (c) not essential. Replies received from almost two score pediatricians revealed three who insisted that rattles were essential to the health of children; fourteen considered them not indispensable but highly desirable, if available; the rest considered them nonessential. Only one pediatrician considered pacifiers desirable; two considered teethers essential, and six considered them desirable. Thus the vote was overwhelmingly against the essentiality of these devices!

As should be expected, the distinguished authorities in their desire to be helpful, suggested a substitute which might, in these abnormal times, be used to compensate for the lack of the previously mentioned aids to pacification. Almost unanimously the experts, when requested to suggest a substitute, opened their mouths and placed their thumbs inside.

DOCTORS' WIVES ORGANIZE FOR WAR SERVICE

——In the Old South, the Doctors' Aide Corps is performing valuable service to relieve the shortage of medical personnel

AN EXPLOSION followed by fire in a war plant at ——— injures hundreds. The hospitals are jammed with victims of concussion, flying debris, severe burns. Many are suffering from shock, need immediate transfusions. But the hospitals in ——— haven't been able to build up large blood banks or reserves of stored plasma. So harassed hospital workers must start the laborious task of calling relatives and friends of the victims, getting them to the hospital, typing and matching their blood. Meanwhile, victims are dying.

A youngster in ——— is sent off to school in the morning by his mother, who hasn't noticed—or is too tired and busy to care—that his nose is running and his eyes are inflamed. By afternoon, the child is sneezing violently, his face is flushed. Finally, the teacher sends him home. He has measles. He has exposed his classmates, and within two weeks the overworked doctors of ——— may have a full sized epidemic to add to their burden.

In a little apartment on the outskirts of ———, a young wife who's been expecting to call the doctor any day is seized with a sudden cramp. When it passes, she goes to the telephone and dials her doctor's office, expecting that the cheery, reassuring voice of his office assistant will tell her at once where he is and how soon he will come. But no one answers. The cheery receptionist has left to take another job, and in ———, a war industry town, the doctor hasn't been able to replace her. With growing fear, the young wife waits for the pain which she knows will return.

In war year 1943, with nearly a third of the nation's doctors and thousands of trained medical technicians and hospital workers absent from home in service with the armed forces, these scenes might be taking place in any city or town in the United States. These and the many other tragedies and near tragedies caused by the shortage of medical personnel, however, are not likely to come to Atlanta, Ga., because there the doctors' wives —members of the Woman's Auxiliary of the Fulton County Medical Society—have organized the Doctors' Aide Corps, a special wartime agency planned to stretch the diminishing service of doctors and their assistants as far as possible to avoid just such emergencies. Inaugurated last fall, the Doctors' Aide Corps was immediately successful in Atlanta. Today, auxiliaries in nearby states of the Southern Medical Association are busy organizing similar groups, and the Advisory Council of the American Medical Association has endorsed the program for immediate adoption by state and county auxiliaries throughout the country, subject to approval by local medical societies themselves. As a headline in a recent issue of the Atlanta *Journal* said enthusiastically: "Doctors' Aide Corps, Atlanta Brain Child, Sweeping Over U. S.!"

Traditionally stay-at-homes who are resigned to last minute phone calls resulting in lonely dinners, the doctors' wives today are going to bat for their overworked spouses.

The idea of the Doctors' Aide Corps originated with Annabel Greene, whose husband, Dr. Edgar Hill Greene, is professor of gynecology at Atlanta's Emory University School

By R. M. CUNNINGHAM Jr.

of Medicine and a practicing surgeon and gynecologist in the city. When she became president of the Fulton County Auxiliary last year, Mrs. Greene was keenly aware—as all doctors' wives are today—of the many emergencies which arise as a result of the "doctor shortage." She wanted to do something about it. Already another Auxiliary officer, Mrs. James N. Brawner, wife of an Atlanta psychiatrist, was thinking about an intensified, community-wide program of health education—an enlargement of one of the Auxiliary's routine educational functions with special emphasis on wartime health problems. Together they started to work out details. Then Mrs. Greene heard that another organization, the Civitan Club of West End, Atlanta, had recently undertaken a blood typing project which, in a small way, was performing a useful service. Surely, Mrs. Greene and her associates thought, the possibility of fatalities resulting from any large-scale disaster involving the civilian population would be greatly reduced if a registry were readily available showing the blood types of a large number of citizens. So why not organize the service on a citywide basis? Why not have a record of the blood type of every Atlantan available where such records are needed most—in hospitals?

Little by little, plans for the blood type registry and the extended health education program took shape in the minds of Auxiliary officers. They knew that fewer and fewer doctors would have time to give needed health talks to grammar and high school children, parent-teacher associations, women's clubs and other civic groups. Why couldn't the doctors' wives be trained to take over this important function? The Red Cross was offering instruction in first aid, nutrition, home nursing and hospital bedside care—wouldn't an organized effort to sell these courses to the community pay dividends? Mrs. William A. Smith—Dr. Smith practices neurology and teaches Emory medical students—had another idea. Mrs. Smith had heard a lot about the office help problem; she knew that valuable doctors' time was wasted hiring and training new girls and keeping things running during the more and more frequent office "interregnums." How about trained volunteers to take the place of receptionists, telephone girls, typists and bookkeepers? With every one thinking hard about how the group might *(Continued on page 520)*

Scene in one of the blood typing laboratories of the Doctors' Aide Corps. Supervisor and receptionist are in blue uniform, technicians in white.

social hygiene IN WAR AND PEACE

By COLONEL W. LEE HART

WAR has always been one of the great episodes in human experience which focuses the attention of the people on problems which in days of peace are allowed to rest in concealment. Though venereal diseases are spotlighted by war, this does not necessarily indicate a rise in the incidence of the venereal diseases in either the military forces or the civilian population. It means merely that they are uncovered, and that their true significance is weighed against the availability and efficiency of manpower.

For over four decades there has been a steady rectification of the erroneous conception of venereal diseases as one of the scourges visited on mankind by providence. The proper conception is that they are contagious diseases and like all such must be attacked by well known medical processes.

The war effort now demands that definite measures be taken to eradicate these disabling diseases from the people of the nation. We must cease to view the venereal diseases as pertaining to one group or unit. It is as important to eradicate them from the various components of the civilian population as from the military personnel. In this emergency, military leaders are primarily concerned that the military personnel should not have venereal diseases in order that they may be maintained at full strength in the ranks; the civilian constituents of the population are equally interested that there be no loss of those critical items, man-days and efficiency, when the maximum effort is called for from all. It is therefore imperative that every possible effort be put forth to reduce this loss in all elements of the population to a minimum in order that a more effective force may be maintained. It is most encouraging that those in authority, both civilian and military, are taking cognizance of the problem, and vigorous programs to stamp out these diseases are being put into effect in more and more communities.

The military authorities have brought to the attention of all component personnel their individual responsibilities for intensive and unrelenting effort to reduce the incidence of venereal diseases. Improvements have been made, but the ultimate goal is not yet in sight, and it is impossible for the military forces ever to successfully deal with the problem alone. The great emphasis which has been placed on the military phases of the problem during the past years has tended to obscure, to some extent, one very obvious fact—namely, that the problem is not exclusively military and, in fact, that it is not basically military at all.

Venereal diseases in the armed forces are simply a reflection of conditions among civilians, because all venereal disease in the military forces is acquired from the civilian population. Military authorities search for and effectively isolate all cases under their jurisdiction. The usual spread of infection, therefore, is from civilian to military rather than from military to civilian. The military authorities cannot hope to stamp out these diseases in their personnel while a great reservoir of infection still exists in the civilian popu-

lation. Such a reservoir will exist until our people, as a whole, are made acutely aware of its presence and its devastating effects on the civil population from which the military is drawn, and to which all venereal infection among the military population must be charged.

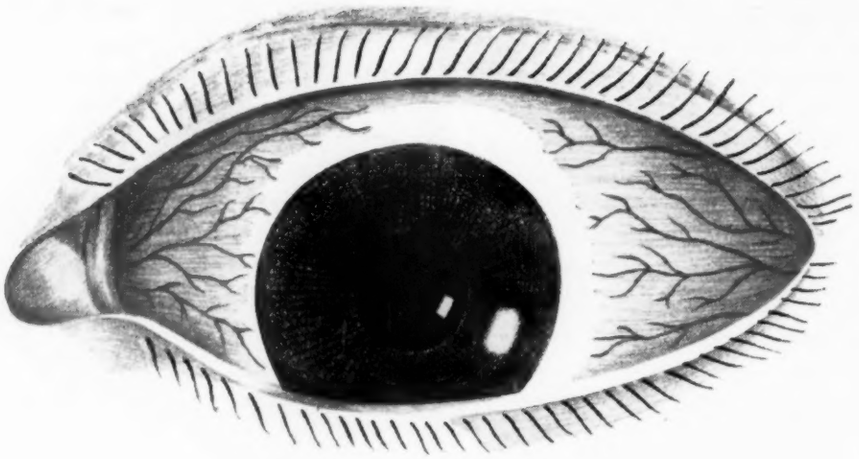
The losses in man-days incurred by the military forces as a result of venereal diseases are readily demonstrated, and consequently it is not difficult to arouse enthusiasm in favor of control from a military aspect. Civilian losses on the other hand are not so easy to demonstrate, but experience with the draft in World War I and Selective Service in the present war throws much light on the subject. The rate of venereal disease among men called for examination has been consistently much greater than among men in the combined armed forces. Since the former represent a fair sample of the civilian population from whence they come, we must conclude that the incidence among civilians is correspondingly greater than among military personnel.

The losses to industry are tremendous. Absence from work and hospitalization because of disabilities incident to venereal diseases result in great loss of man-days. This can be ill afforded during normal times, but during war it is intolerable. In addition, complications of the venereal diseases greatly reduce the efficiency of employees even while they still continue on duty, and the late manifestations of syphilis permanently remove many workers from the production lines. In modern war the production line of industry is as important to our war effort as the front line of battle, and any interference with it is definitely against our national effort.

Successful conduct of the war demands that venereal diseases be rigidly controlled in both the military and civilian populations. Since the usual spread of infection is from civilian to military, cooperation of the medical authorities in both groups is essential to control

As has already been done in the military service, the authentic facts regarding venereal disease must be clearly presented to every section of the civilian population. The characteristics of these diseases must be recognized, for such recognition makes obvious the procedure necessary to accomplish their control. The present success of the military program is due to the fact that the control procedures adopted have been governed by an understanding of the nature of the diseases in question. First, they are called by their right names; they are not known as "social diseases." There is nothing "social" about them. In fact they are quite "antisocial."

In the Eighth Service Command, for example, the venereal disease control program is based on the simple fact that venereal diseases are communicable diseases. This recognition is responsible in a large way for the progress that has already been attained. The characteristic which sets communicable diseases apart from other diseases is that they are maintained by the transmission of the causative agent from infected to noninfected susceptible individuals. Their control is basically the same in all instances, in that it depends on preventing this transfer and breaking the chain of infection. This is ordinarily done by controlling the activities of infected individuals in such a way that susceptible persons will not be able to contact them in a manner which will allow transfer of the infectious agent. Two things are necessary to accomplish this in dealing with the venereal diseases: First, the infectious individuals must be found, and second, some provision must be made for limiting their activities while they are in an infectious state. *(Continued on page 542)*



Are Your Eyes Red?

WITH the ever increasing interest in Red Cross first aid courses, the public is becoming more and more health and body conscious. The knowledge acquired by the students in these courses will be of invaluable assistance to the community in view of the shortage of doctors and nurses created by the national emergency.

The eyes are among the most delicate organs in the body. Nurses and family doctors realize this and refrain from treating complicated eye disorders until advised by specialists trained in this branch of medicine. The neighbor next door, however, does not hesitate to diagnose and treat your eye trouble. Every red eye is a "cold" which the wise friend can cure with argyrol and yellow mercury oxide ointment.

Your eyes may become red from many causes. The most common source is eyestrain due to excessive reading by poor light. Workers in factories where dust or fine particles fly about leave their benches with inflamed eyes. Have you ever been in a room devoid of air but full of cigar, pipe and cigarette smoke? Your eyes were not very comfortable until you reached the fresh, outdoor air. These are a few examples of common abuses, and the simplest treatment is to watch nature's red light of danger and avoid unnecessary irritation. If you fail to take heed, the edges of the eyelids become granulated and stay red. The eyelids then become a favorable site for infection, and styes may develop—especially if your body resistance is lowered by lack of sleep, overwork or undernourishment.

"Pink eye" is an alarming expression used freely by the public to describe many disturbances, whether it is a stye, an inflamed cyst on the eyelid or an infection, mild or dangerous, inside the eyelids. A transparent tissue covers the whites of our eyeballs and is continued over to the back of the upper and lower eyelids like a thin skin. This skin, which ends at the edges of the eyelids, is called conjunctiva, and when it is inflamed following infection the condition is referred to as conjunctivitis. Just as one may suffer a catarrh of the lining of the nose, a catarrh of the eyelid and eyeball lining can develop. As a result the membrane becomes bright red in color, the lids swell, and matter oozes from them. Early in a mild case the eyes are watery, and some flakes of mucus are seen. Later, in a more severe type of conjunctivitis, actual pus may exude from the eyelids which accumulates and dries during sleep, so that the lids may be difficult to separate on awakening. The eyes itch and smart as if sand were thrown into them. Although the infection starts in one eye, after two or three days the second one is similarly affected.

Conjunctivitis is caused by germs which get in the eyes either from the nose following a cold, from wind and dust, or through contact by fingers, towels or handkerchiefs of persons with contagious discharges from their eyes. The germs that cause eye catarrh as a rule are not powerful. However, some bacteria, such as the streptococcus or the ones found in diphtheria, gonorrhea, trachoma and pneumonia, are dangerous. They produce severe infections which may cause ulcers to develop on the central, clear part of the eyeball, known as the cornea. If a corneal ulcer is allowed to spread, the infection penetrates inside the eye and sight may become impaired, or the eye may be lost entirely.

By JAMES W. SMITH

"Pink eye" may also mean a trivial catarrh due to dust, or an allergy or sensitivity to pollens, drugs or cosmetics. Remove the cause and the pink eye becomes white. On the other hand, pink may turn to red and tears to pus. The infection may grow so rapidly that home or drug store treatment means dangerous delay. The first aider knows the rule—"know what not to do." The eyes must be kept free of mucous shreds or pus by frequent irrigations with boric acid solution every two hours. The inside of the eyelids must be washed thoroughly to obtain relief from the scratching, sandy sensation. The pus accumulates high behind the upper lid, where the conjunctival tissue is most abundant. For this reason the popular eye cup is not as effective as a piece of cotton or a short, blunt eye dropper which allows the boric acid to trickle into the eye. The lid swelling can be reduced by applying ice cold boric acid compresses for fifteen minutes every four hours. Do not put strange medicines, advised by well meaning but uninformed friends, into your eyes. If simple home treatment fails, consult your family doctor. He will know if your condition warrants the assistance of an eye physician. Infections of the conjunctiva may occur at any age, even in babies 2 or 3 days old, and they come most often in the spring and autumn. In this connection a special form of conjunctivitis should be mentioned, which recurs annually during warm weather and is known as spring catarrh. It is not contagious and is characterized by tearing, intense itching, light sensitivity and only slight redness. Some people with seasonal allergy (to flowers, pollens and foods) are subject to this uncomfortable disorder, which clears with the onset of cold weather.

A terrifying example of bright redness is seen after a blow, when a small hemorrhage spreads blood beneath the transparent skin lining the white of the eye. Usually the blood can be cleared away in a week or two by the application of warm boric acid compresses. In middle-aged persons a hemorrhage occurring without any apparent external injury may be due to high blood pressure.

Did you ever have a chip of coal dust blow into your eye? Remember how painful it was and how much redder it became as you continued to rub? Dust usually floats out if given an opportunity. Keep the eyelids closed for ten seconds after the dust particle enters. Do not rub it into the sensitive cornea. Sufficient tears will accumulate in a few seconds so that the foreign particle will usually flow out when the lids are opened again. Do not remove something that cannot be seen. Do not poke at your eye with a handkerchief. If the cornea is scratched your discomfort will be aggravated. Try to flush out the dust particle at home. If unsuccessful do not go to a store for help. Consult a physician. The particle may be stuck to the eyeball, and it may be so small that the doctor can detect it only with the aid of concentrated light and magnifying spectacles.

The broad, colored ring of brown, blue or gray surrounding the black pupil is known as the iris. When it becomes inflamed, iritis develops. This condition is painful and interferes with vision more than conjunctivitis. Yet the inflammation is pinkish and not red, and the color is only seen on the white of the eye. Iritis may develop from without, after an ulcer on the cornea. It is usually the internal expression of some general medical disturbance. Some of the diseases that produce iritis are syphilis; gonorrhea; focal infections in teeth, tonsils, sinuses and intestines; rheumatism; diabetes and tuberculosis. Iritis is a serious eye affection requiring prompt and specialized treatment to avoid complications and loss of eyesight. You will remember that cold compresses were recommended for conjunctivitis. For inflammations of the eyeball proper warm compresses or the eye cup bath are more soothing.

(Continued on page 524)

BRING YOUR FIRST AID UP TO DATE

By E. O. NICHOLS Jr.

IN THESE fast moving days, the treatment of accident victims before they reach medical havens must be sensible and streamlined. If you insist on using the first aid routines of yesterday you will not only be comparatively ineffectual, but you may bring harm, even real danger, to those you try to help.

"What shall I do?" "How shall I do it?" Learn the correct answers *before* you find yourself at the scene of accident. For some day, without warning, there you will be. Before you—two smashed cars and their pitifully mangled occupants. The first man you reach lies just off the road—a crumpled human bundle—in deep coma, barely breathing. His broken arm is twisted back at a crazy angle; blood is trickling from his mouth.

Before you recover from the chilling horror of this sight, you are confronted with one still worse. A small flame appears in the farther car and in an instant the entire mass is burning fiercely. An agonized shriek jerks you toward it. The next few seconds are a vague nightmare. Later you wonder how you ever managed to extract the screaming man from the flaming wreckage. Your quick work has saved his life, but he is terribly burned before you can smother his burning clothes.

The third victim, a woman, is huddled groggily on the roadside. Blood is pouring from a gash over her temple, covering the side of her face and soaking her dress. The sight nearly makes you ill. But that will never do! You have taken on a job—you with the pounding heart and the wobbly knees. These three unfortunates are your responsibility until they reach the nearest hospital or doctor. For half an hour their very lives may depend on you. Can you cope with the situation?

Desperately you try to recall the instructions you received in that first aid course you took a few years back. You remember how to make a splint—but no time for that even if you had the materials. You could tie a sling on the

unconscious man's broken arm—but he has so much else wrong with him that that seems futile. The other victim is sobbing with pain from his burns—if only you had some salve! What worries you most, however, is that woman's scalp wound. Now you know all about tying tourniquets, but you don't see where you could put one on her unless you tied it about her neck, and that seems illogical.

You soon come to the conclusion that you need a bit of expert assistance. Really, though, you should not despair. A few simple maneuvers will bring the entire situation under control. Let's see what a physician would do were he suddenly caught in your dilemma and had nothing with which to work but his hands and his head.

First, the doctor would stop the woman's hemorrhage. For him, that would offer no great difficulties. He would simply press his finger on the skin over the bleeding point as you would press yours on a leaking hose. If blood clots hid the exact source of hemorrhage, he would wipe them away with a piece of cloth so that he could see the bottom of the wound more clearly.

Ordinarily, one finger exerting pressure at a point exactly above a point of hemorrhage is effective, even if the bleeding vessel is large. Occasionally, however, a wound will be so great, and so many vessels will be torn, that more pressure will be required. In this case the clenched fist or a wad of clean clothing must be pressed down over the wound area, squarely over it, or even into it if necessary. Remember, always, the pressure must be firm and unabating.

Tourniquets are valuable only if they are used correctly, otherwise they frequently do more harm than good. Your mind may leap to the thought of getting the tourniquet too tight and not loosening it frequently enough, thereby causing gangrene of the part. That is of course possible, as you have no doubt been cautioned; in fact, people have been overcautioned in this, for now they almost never get their tourniquets tight enough.

A man and his wife were joy riding some fifty miles from the nearest hospital. The window glass at his side had been broken, and a movement caused him to slit a small vein near his elbow. It bled, but not much, so they bandaged it with a handkerchief and continued their leisurely drive. Soon, however, blood seeped through the bandage. Since that apparently called for more drastic measures, the wife made a new bandage from her slip and converted the handkerchief into a tourniquet, which she tied about his upper arm. "That will fix things," they thought. But to their consternation, the bleeding became more and more profuse. In *(Continued on page 514)*

Prompt first aid administered by a fire department inhalator squad saved these Brooklyn men who were trapped underground, overcome by gas

Associated Press Photo

Millions of Americans have learned the rudiments of first aid: stop bleeding, artificial respiration, treat for shock, keep crowds away—and call a doctor!

BABIES born with Heart Trouble

By ROBERT H. FELDT

"DOCTOR, our baby was born with heart trouble. We know there is no hope for him, but we want you to look after him as long as we are in town." The young mother was almost in tears as she spoke. She and her husband had moved to a new locality so soon after their baby was born that there had been no opportunity to discuss the problem with their former family physician.

"Don't be so sure that the outlook is hopeless," replied the doctor. "Bring the baby in for an examination. Some forms of congenital heart disease are compatible with a long and useful life. One type can now be completely cured by an operation." Because the mother was obviously distressed, the doctor spent a great deal of time reassuring her.

"I never heard of such a condition before. Why should this thing happen to us?" lamented the mother.

The doctor explained that this anomaly is due to abnormal development of the fetal heart and that it is by no means rare. Between 10 and 15 per cent of all the heart trouble found in school children is of this sort. There are thousands of victims of congenital heart disease in the United States.

"Was our baby born this way because of some fault of ours?" queried the mother.

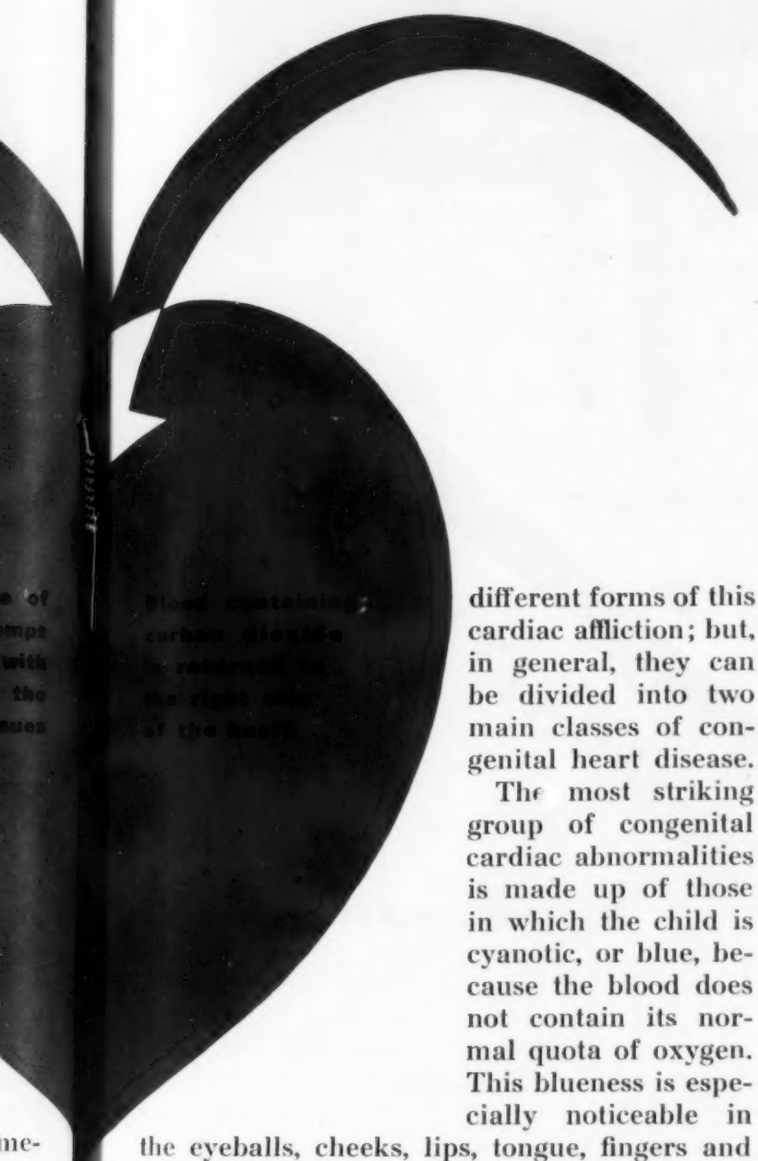
The doctor replied that in many cases a definite cause could not be discovered.

"No one in our family ever had anything like this. If we have another child, is there a chance that it, too, will have heart trouble?" asked the mother.

"Since the cause of these abnormalities is generally obscure," answered the doctor, "the odds are decidedly in your favor and you need not hesitate to have another child."

It is true that congenital heart disease sometimes runs in families, but this coincidence is unusual. More often the child with congenital heart disease is the only one in his family who has ever had such a condition. His abnormality is simply an accident in development.

"Is it possible to tell whether my baby might be one of those who could expect to live a normal life?" asked the mother. The doctor explained that the life expectancy of these children depends in a large part on the kind of congenital heart disease that is present. The appearance of the child, his ability or inability to carry out normal physical activity and the results of a careful examination will usually indicate the nature and degree of abnormality. Examination with the stethoscope reveals the presence of more or less characteristic heart murmurs. At times, special studies including x-rays and electrocardiograms are necessary to confirm the diagnosis. There are dozens of



different forms of this cardiac affliction; but, in general, they can be divided into two main classes of congenital heart disease.

The most striking group of congenital cardiac abnormalities is made up of those in which the child is cyanotic, or blue, because the blood does not contain its normal quota of oxygen. This blueness is especially noticeable in the eyeballs, cheeks, lips, tongue, fingers and toes, but the whole body usually has a bluish or purplish cast. Sometimes the blueness is present from birth, or it may not appear until later in life. As the child grows older, he develops a peculiar deformity of the fingers and toes, known as clubbing. The last joint of these digits becomes broadened and thickened and the nail becomes rounded, giving the finger or toe a clubbed appearance. Lack of sufficient oxygen makes the patient breathless, and even walking a block or two may be impossible.

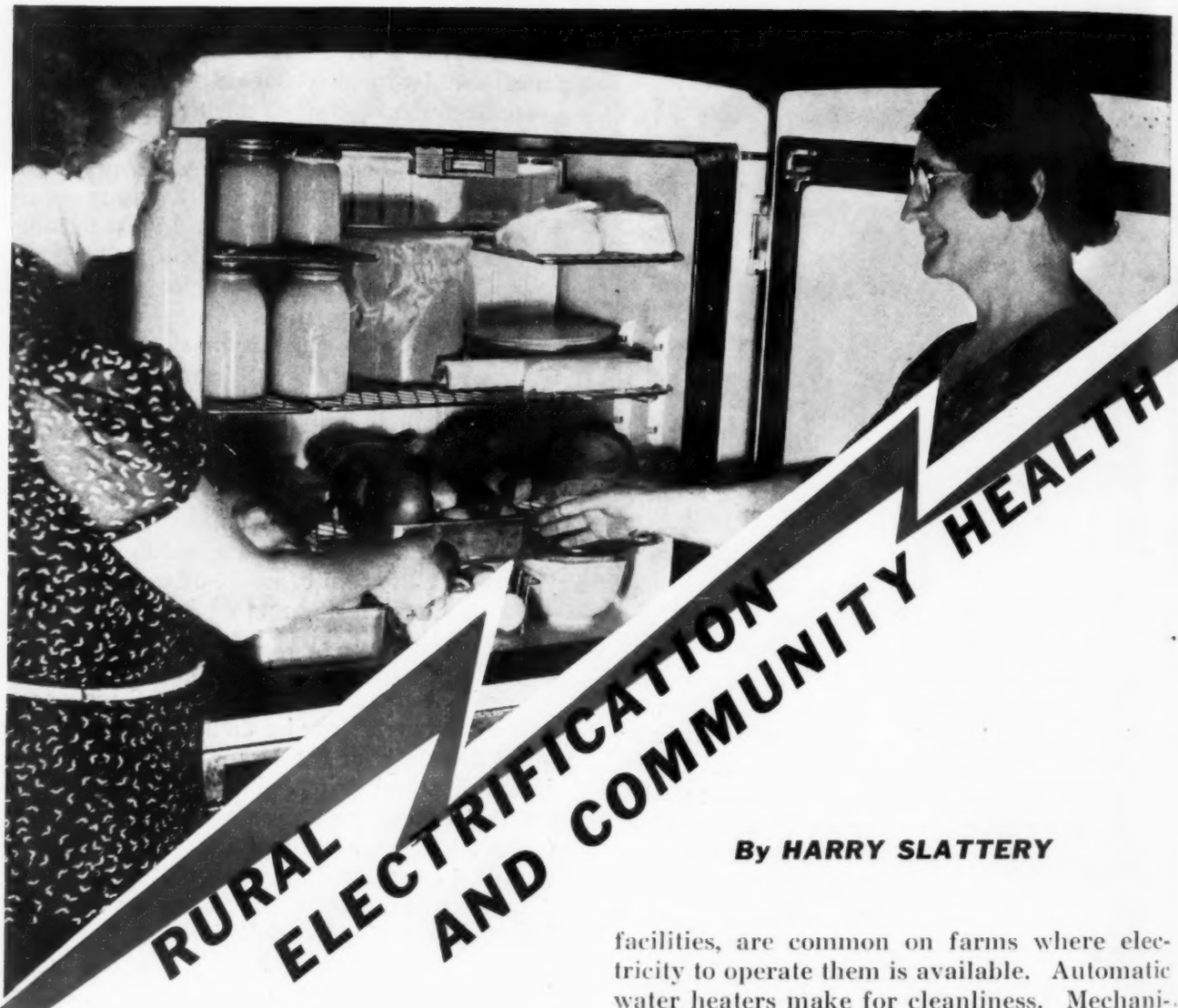
Normally, the left side of the heart pumps bright red arterial blood containing oxygen to the body tissues where the oxygen is replaced by carbon dioxide turning the blood a purple color. Purple, impure blood returns to the right side of the heart via the veins. From there, it is pumped to the lungs where the carbon dioxide is replaced by oxygen, and it again becomes bright red and pure before it returns to the left side of the heart. Normally, blood from the two sides does not mix. In the cyanotic form of congenital heart disease, the wall separating the two sides of the heart is defective or other abnormalities are present so that purple venous blood is constantly mixed with red arterial blood. Therefore, the blood circulating to the tissues is purple and when it shows through the skin, a blue or purple color results.

On the average, the prognosis is worse for those who have the cyanotic variety of congenital heart disease. Many of them die in infancy or early childhood, but there have been numerous exceptions to this general observation. Two well known heart specialists, Dr. Paul D. White and Dr. Howard B. Sprague, reported the case of a noted musician who survived to his sixtieth year with this form of heart disease.

The doctor told the mother how this patient, Henry Gilbert, achieved international recognition even though he was seriously handicapped all his life. The peak of his career came the year before he died when he was the guest of honor at the Frankfort International Music Festival where his "Dance on Place Congo" was played. From earliest childhood, Gilbert was cyanotic and breathless. He was unable to run and play with other children. A number of doctors expressed the opinion that he would not live to adult life.

In spite of poverty, frequent headaches, breathlessness and recurrent dizziness, Gilbert became famous. His manner of living was closely supervised by his devoted and understanding wife, who constantly guarded him against overexertion and fatigue. She was careful to protect him from exposure to colds and infections. In reporting his history, White and Sprague said that it should "prove a hope and inspiration to many other cardiac cripples," and indeed it has.

The other main class of congenital heart disease is the noncyanotic group, which also has a great many subdivisions. There is nothing in the outward appearance to suggest heart disease, and only a careful examination will establish its presence. The kind of abnormality present determines the expectancy; but, in general, the outlook is more hopeful. Some patients may live an entirely normal life unaware of or unaffected by their minor cardiac deformity. In others, the developmental defect is so great that the cardiac function is definitely impaired. *(Continued on page 532)*



RURAL ELECTRIFICATION AND COMMUNITY HEALTH

By HARRY SLATTERY

"FARM FOR SALE: modern, electric." Look through the farm advertisements in your newspaper. You'll find many farms described as modern, with central station electric service. Thereby hangs a tale of modern living in more than one third of America's farm homes. Well equipped homes —rural as well as urban—generally mean better health. Improved health promotes better citizenship.

When war broke out, America was expanding its rural electrification program at the rate of more than a third of a million farms a year. With electric service came scores of short cuts to modern living. Automatic pressure water systems, with home plumbing and sanitary facilities, are common on farms where electricity to operate them is available. Automatic water heaters make for cleanliness. Mechanical refrigerators prevent food spoilage and promote improved diets. Washing machines and irons, adequate lights, kitchen ranges and electric mixers, toasters, percolators and electric fly catchers all help to promote health and to remove drudgery in the farm home. They leave time for living, for war work and greater food production.

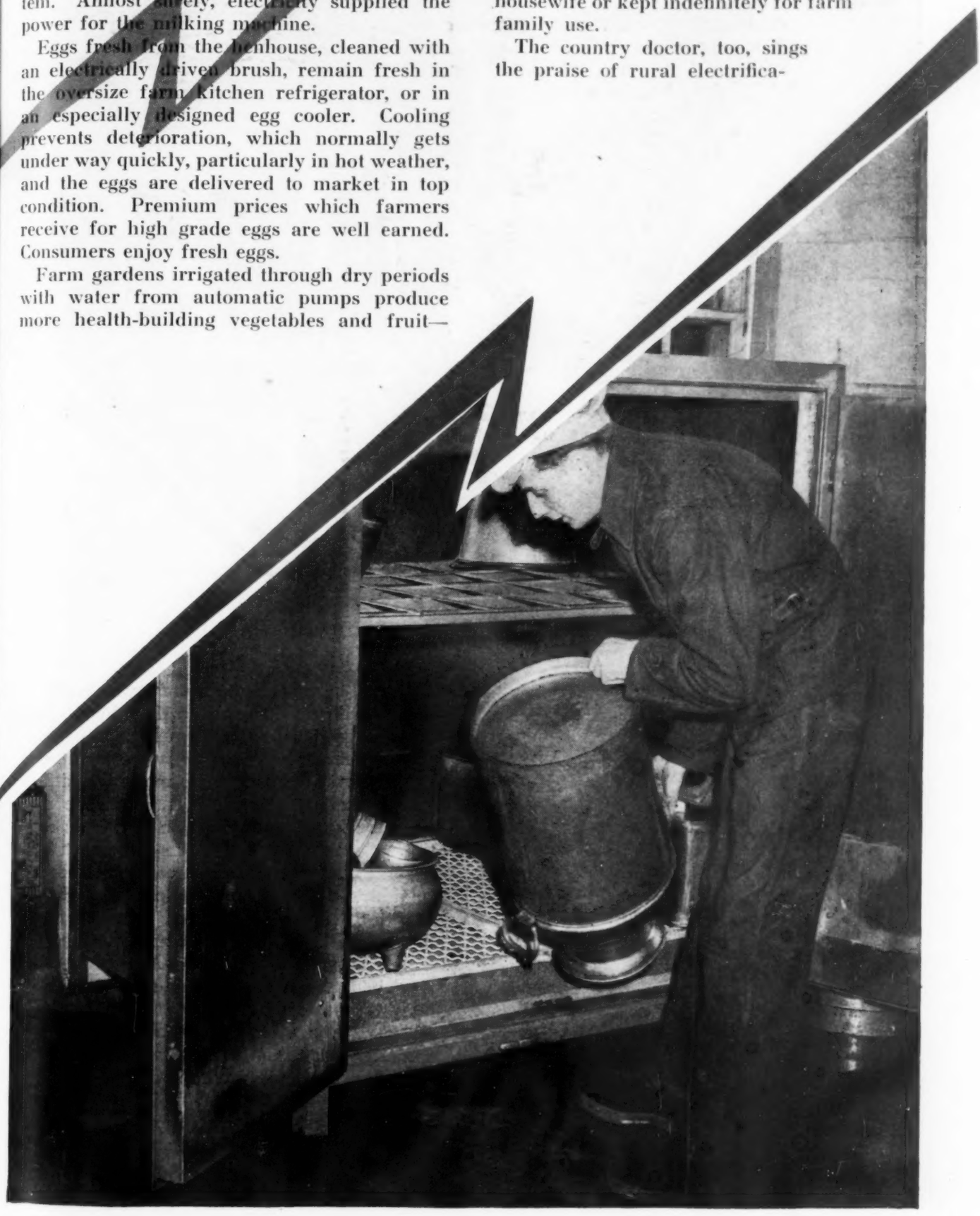
The nation's food supply—its basic health weapon—comes from the farms. Increased domestic demands for food, needs of our far-flung armed forces and those of our allies, have brought on rationing. In this critical situation, the electrified farm is far better equipped to increase production and to have health safeguards than the one that is still hand tooled. If the milk on your breakfast table comes from one of the nation's 2,300,000 electrified farms, it is probable that it first lost its animal heat in an electric milk cooler, that the pails and cans in which it traveled from the cow to the processing plant were washed and steril-

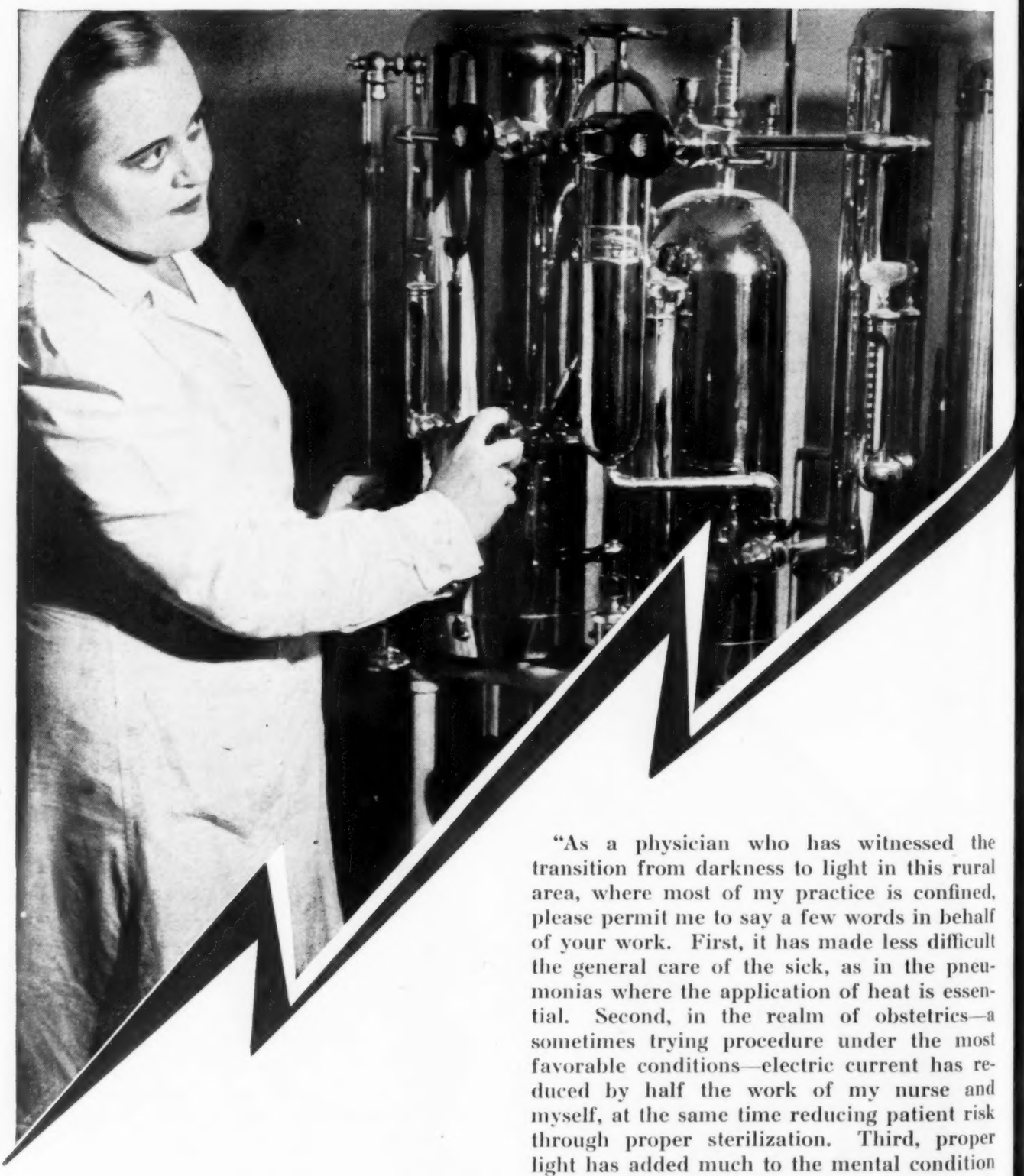
ized in hot water from an electric heater. The chances are that the stalls and milk house were cleaned with water from a pressure water system. Almost surely, electricity supplied the power for the milking machine.

Eggs fresh from the henhouse, cleaned with an electrically driven brush, remain fresh in the oversize farm kitchen refrigerator, or in an especially designed egg cooler. Cooling prevents deterioration, which normally gets under way quickly, particularly in hot weather, and the eggs are delivered to market in top condition. Premium prices which farmers receive for high grade eggs are well earned. Consumers enjoy fresh eggs.

Farm gardens irrigated through dry periods with water from automatic pumps produce more health-building vegetables and fruit—good food for the farm family. Frozen in the farm quick-freezing unit, the produce may be delivered garden fresh to the urban housewife or kept indefinitely for farm family use.

The country doctor, too, sings the praise of rural electrifica-



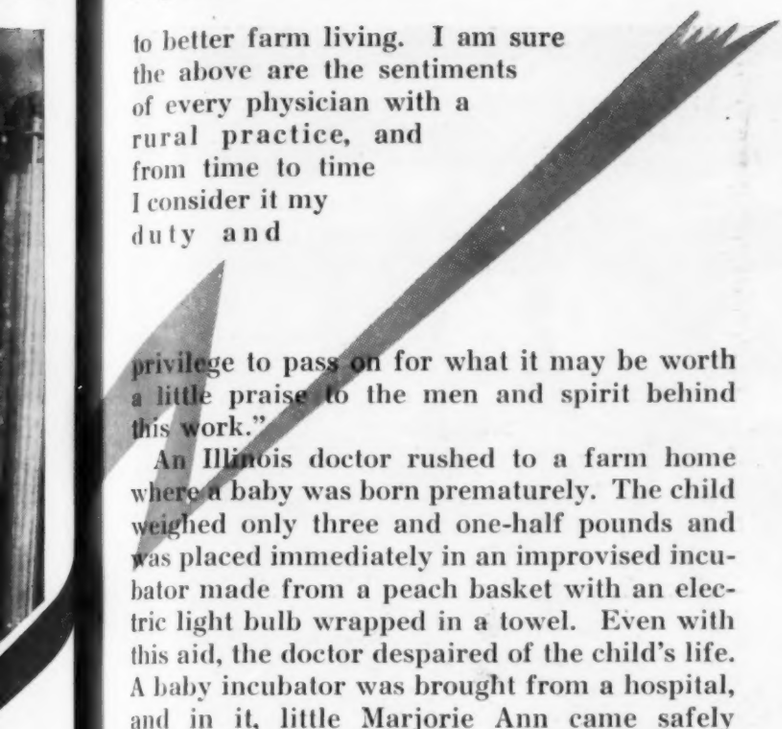


tion. Recently the superintendent of a power cooperative financed by the Rural Electrification Administration got this letter from Dr. John O. Fulenwider Jr., of Pageland, S. C.:

"In the stress and strain of daily living we sometimes pass unheralded the really worth while projects put on foot by our government for mankind's social betterment.

"As a physician who has witnessed the transition from darkness to light in this rural area, where most of my practice is confined, please permit me to say a few words in behalf of your work. First, it has made less difficult the general care of the sick, as in the pneumonias where the application of heat is essential. Second, in the realm of obstetrics—a sometimes trying procedure under the most favorable conditions—electric current has reduced by half the work of my nurse and myself, at the same time reducing patient risk through proper sterilization. Third, proper light has added much to the mental condition of my patients, a fact many times overlooked. A well lighted sickroom, with the pleasures of reading and daily contact with the outside world through the medium of the radio, has made more bearable many long periods of convalescence.

"I could enumerate many more benefits we all know—refrigeration, running water and so on, all of which have added immeasurably


to better farm living. I am sure
the above are the sentiments
of every physician with a
rural practice, and
from time to time
I consider it my
duty and

privilege to pass on for what it may be worth a little praise to the men and spirit behind this work."

An Illinois doctor rushed to a farm home where a baby was born prematurely. The child weighed only three and one-half pounds and was placed immediately in an improvised incubator made from a peach basket with an electric light bulb wrapped in a towel. Even with this aid, the doctor despaired of the child's life. A baby incubator was brought from a hospital, and in it, little Marjorie Ann came safely through the first few critical weeks of her life. Parents and doctor agreed that without electricity, the child would not have lived.

In a western Minnesota farm home lay a woman, too ill to be moved, who needed x-ray. The doctor brought a portable x-ray machine to the home, which had recently been connected to the rural power line. With it he administered treatment.

A 5 year old girl on another Minnesota farm was severely burned when she played with matches and set her dress on fire. Because the child was unable to wear clothes or support bed covers, the doctor devised a tent heated with light bulbs. Under this electrically heated covering, the child made a rapid recovery in her own home.

Twins, one weighing 3 pounds and 8 ounces and the other 3 pounds and 4 ounces, were born to a tenant family on an electrified farm in Victoria County, Texas. The public health nurse rushed incubators. Six weeks later, under the constant warmth of the electric current, the twins weighed 8 pounds and 4 ounces and 7 pounds and 4 ounces.

Health authorities everywhere are on guard against war borne epidemics. If they come, the rural homes with electricity, running water and sanitary facilities will be much better equipped to fight off the scourge or to make patients comfortable than was the average rural home twenty-five years ago.

While rural electrification has made tremendous strides in the past eight years, the job is by no means complete. In 1935, only 10.9 per cent of the farms in the United States were receiving central station electric service. When wartime needs for critical materials curtailed the program in 1942, the percentage had been increased to 38.3. Farm connections are now made only where they will aid materially in food production and save labor, and then only to farms which meet specific requirements.

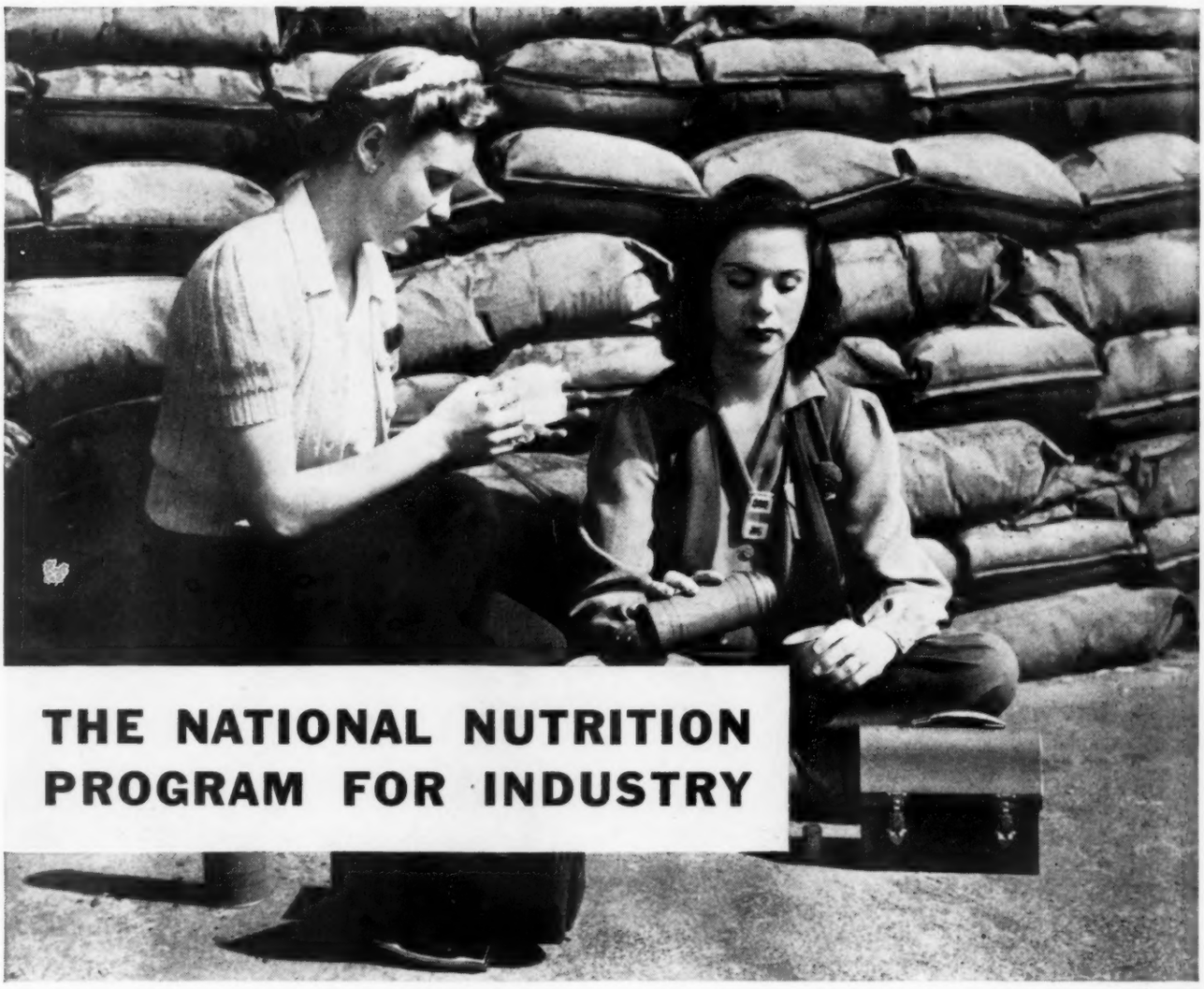
Nearly four million farms are still without central station electric service. But owners of many of these have already laid plans to build cooperative lines and modernize their homes as soon as construction materials are again available. The Rural Electrification Administration has made loan allotments or has applications to extend power service to approximately half a million rural homes, beyond the million already served by REA financed organizations.

The rural electrification movement is not confined to the United States. Rural Britain is looking forward to the time when more of its people may enjoy electricity, modern homes and better health standards. This report comes from the British Ministry of Health's Committee on Design of Dwellings. Little is left in doubt as to what working housewives think of electricity. A memorandum based on replies by 3,000 women to a questionnaire has this to say:

"Women in the country as well as town are almost unanimous in wanting electricity. . . . In villages and rural areas where there is as yet neither electricity nor gas, women want to go straight to electricity. It is imperative that plans should be made to supply electricity to the whole country as a public service. . . . This would make it possible to bring the price of electricity within the reach of every one."

Canadian provinces and the Dominion Government, too, are interested in developing an extended rural electrification program as a postwar undertaking. Latin-American republics for the past two years have sent selected engineers to REA to study both technical and social aspects of the United States rural electrification program. As rapidly as they can, our neighbors to the south will extend the benefit of power to their rural people.

Farmers no longer look eagerly forward to the time when they can "retire to town" where they can enjoy modern living during their declining years. They would much prefer to "retire" to a modern cottage set in a garden plot on the old homeplace, while the children carry on—children to *(Continued on page 535)*



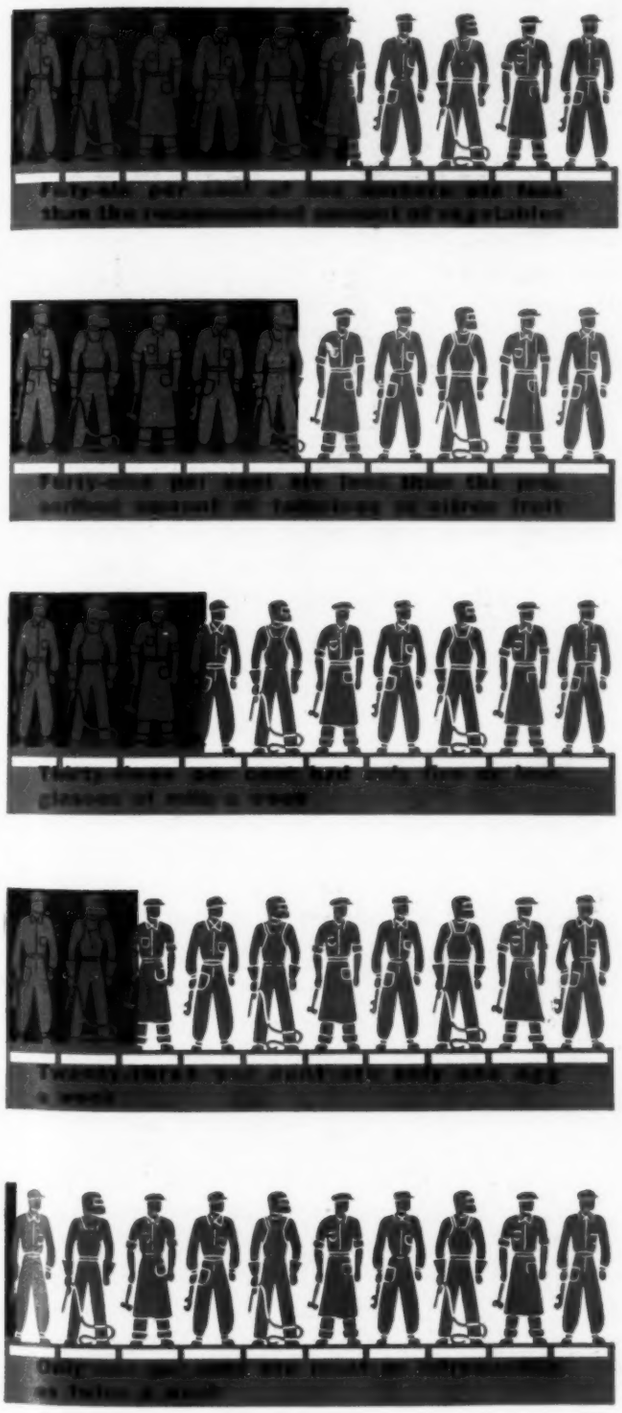
THE NATIONAL NUTRITION PROGRAM FOR INDUSTRY

By ROBERT S. GOODHART

IT IS hardly necessary to recite the advantages which might reasonably be expected to accrue for one who is careful to maintain himself in an optimum state of nutrition. That not only the individual but the nation as a whole would derive benefit from a system that would ensure each and all of us an adequate supply of foods to provide all our dietary essentials will also be accepted without argument. Unfortunately the food situation in this country has never approached such an ideal state. Prior to the onset of the present war, many millions of American people were not eating the minimum amounts of all the essential food factors needed to keep them in good health. In part, economic factors were to blame; every dietary study or nutrition survey of population groups has clearly shown the greatest incidence of poor diets, or of malnutrition, to be in the economically poorest third of the population. However, economic factors have not been, by any means, the sole determining forces, as evidenced by the fact that poor diets and malnutrition occur in all economic strata. Ignorance, food habits and prejudices and problems of supply have been responsible for a considerable proportion of the malnutrition in the United States. The diets of war workers cited by a report of the Committee on Nutrition in Industry and the results of a dietary study on aircraft workers in California nicely illustrate the roles played by ignorance and food habits.

In the California study, 56 per cent of 1,103 aircraft workers were found to eat less than the recommended amounts of green or yellow vegetables, 49 per cent had 0 to 4 tomatoes or citrus fruits a week, 33 per cent had 0 to 5 glasses of milk a week; 0 to 1 egg a week was eaten by 23 per cent, while only 1 per cent con-

sumed meat as infrequently as twice a week. For most of the men, an increased consumption of milk and of citrus fruits, tomatoes and certain green vegetables would correct the major deficiencies of riboflavin, calcium and ascorbic acid and raise the intake of most other nutrients. It is of interest that 85 per cent of the diets furnished the recommended amounts or more of protein. This survey was made between November 1941 and February 1942.



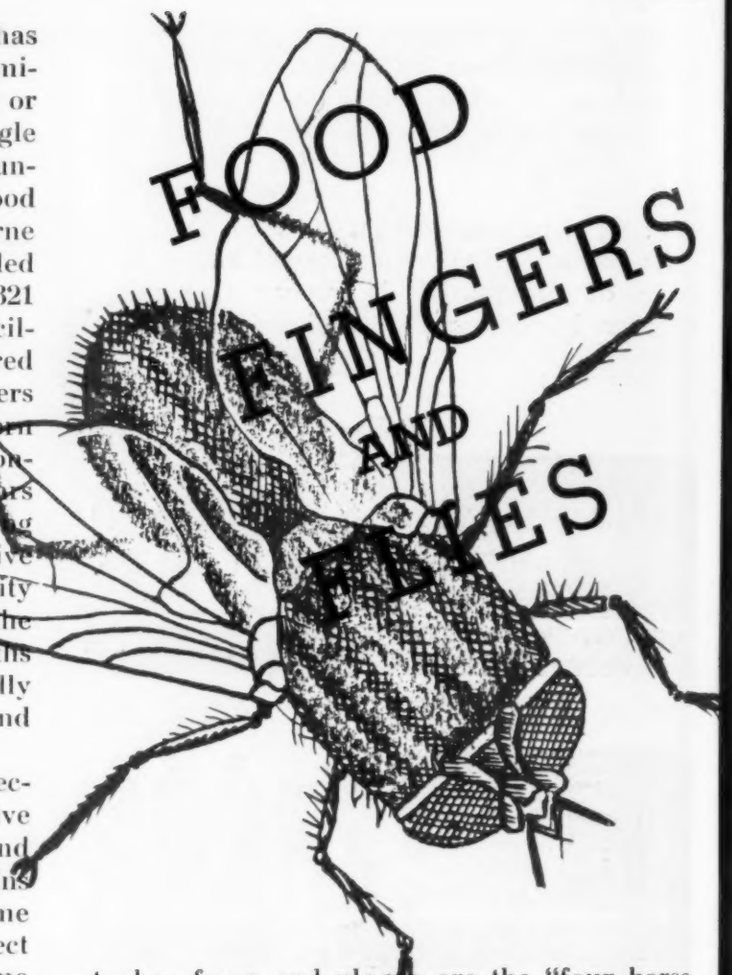
There is reason to believe that the supply of food to this region has deteriorated since then, particularly in relation to meat, milk and milk products, eggs, butter, tomatoes and canned goods.

Since the beginning of the war, the problem of food supplies and distribution has achieved a position of paramount importance in practically every section of the country. Paradoxical as it may seem, this has tremendously increased the importance of the national nutrition program. No matter how efficient a distribution system may be set up, or what efforts might be taken to stimulate farm production, it is most unlikely that we can continue to supply the armed forces and our allies with the foods which they must have without bringing about some marked changes in the eating habits of the civilian population. Control of the production and distribution of foods is the responsibility of the Office of the Food Administrator.

The chart at the left shows results of a study of the diets of aircraft workers in California

The prime function of the Nutrition and Food Conservation Branch, Food Distribution Administration, is, through the national nutrition program, the education of the American people so that every one will make the best possible use of available foodstuffs to meet his nutritional requirements. If morale is not to be adversely affected, changes in food habits necessitated by shortages of particular food items must be preceded and accompanied by effective nutrition propaganda showing that such changes in food habits are not detrimental to health and are often beneficial, that they need not detract from the joy of eating and that the government is doing everything within its power to ensure an adequate diet for all of us.

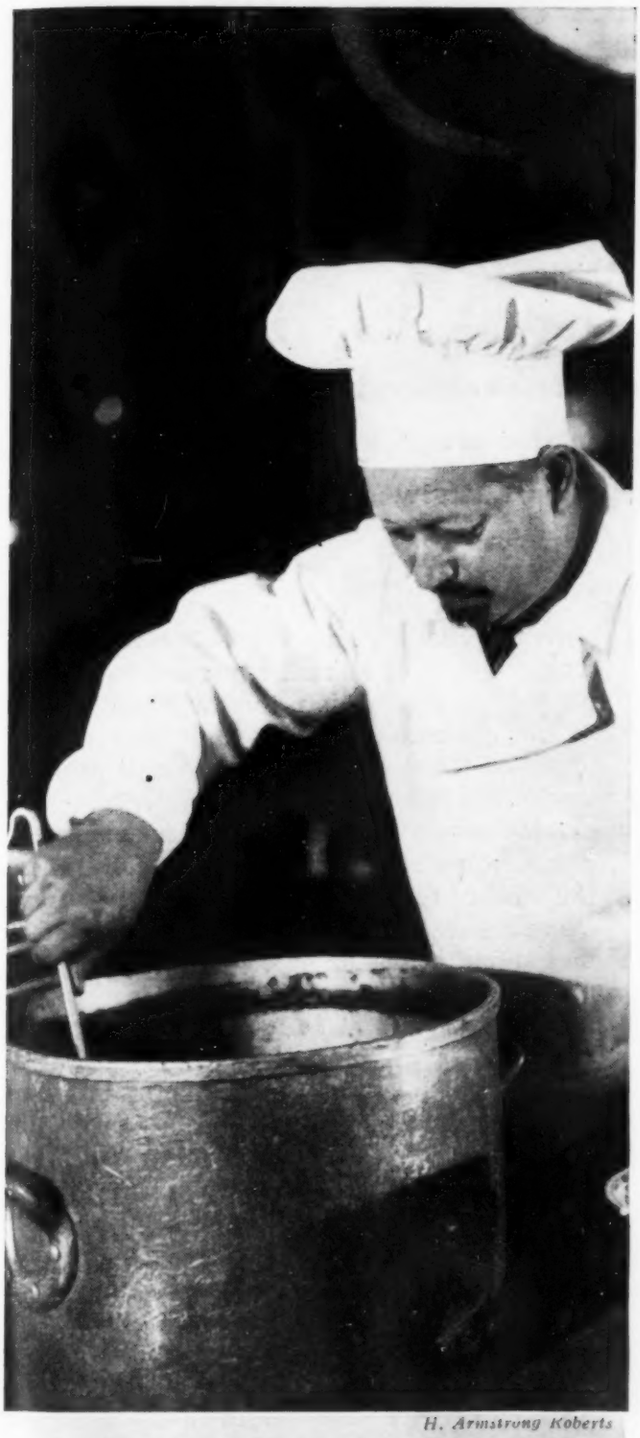
It is particularly important that the nutritional status and the morale of war workers should not be adversely affected by food shortages, poorly prepared and balanced meals and inadequate feeding facilities and eating conditions. The aim of the national nutrition program for industry is to prevent loss in war production through illness and dissatisfaction of war workers arising from poor dietary conditions and misunderstandings of food needs. *(Continued on page 516)*



THERE IS HARDLY any one who has escaped the ill effects of food contaminated by the fingers of his fellow man or by one or more forms of animal life. A single diseased person is capable of infecting hundreds of others through the medium of food which includes water. In 1938 a water-borne outbreak involved 29,250 cases of so-called "gastro-enteritis." In 1939, 609 of the 2,321 patients in a state institution contracted bacillary dysentery because they ate food prepared by three of the kitchen help who were carriers of dysentery germs. Even our most modern hospitals are not free of outbreaks due to contaminated food—a circumstance which appears incongruous in view of the otherwise existing high medical standards. The germs which give rise to disease due to food in the vast majority of cases come from the intestinal tract of the persons who harbor the bacteria to the mouths of those who contract the disease. It is literally "living from hand to mouth," as fingers and food are the chief vehicles of transmission.

Typhoid, dysentery and salmonella infections are the principal diseases whose causative germs travel on the "FFF" (food, fingers and flies). All three of these diseases are cousins under the skin, being transmitted in the same manner by closely related bacteria and subject to prevention for the most part by the same methods. Yet the surprising feature is that while typhoid is largely under control in the United States, bacillary dysentery is not. In 1933, there were 23,349 reported cases of typhoid and paratyphoid. In 1941, the figure had declined to 8,601. For the same years the reported incidence of bacillary dysentery had risen from 625 to 24,918. These are the figures of the United States Public Health Service. The explanation lies partly in the fact that while typhoid is usually promptly recognized and reported, bacillary dysentery is not. Nor is the responsibility solely that of the family physician. It rests squarely on the shoulders of the average lay person who regards diarrhea with indifference, who refuses to have the excreta cultured for the causative germ or who, through ignorance of the danger, transmits the disease to others. In 1937, bacillary dysentery was not even reportable in fifteen of our states, a condition which was finally remedied in 1941 largely through the efforts of the Dysentery Registry, an independent body which has made a special study of this problem since 1933. The hazard takes on added significance in time of war, since bacillary dysentery, malaria, typhus fever and plague are the "four horsemen" of all military campaigns. Individually or collectively, they have triumphed over bullets in many major engagements. To illustrate a few, bacillary dysentery played a decisive role during the invasion of Greece by the Persians in 480 B. C., the seige of Bagdad by the Saracens in 1439, the seige of Metz by Charles V in 1552, the campaign of Frederick William II against the army of the French Revolution in 1792, Napoleon's Russian campaign of 1812, the Crimean War of 1853, the Civil War of 1861, the withdrawal of the British from Gallipoli in 1918 and the German invasion of Poland in 1940. History repeats itself; the second World War is again furnishing evidence that this is true of bacillary dysentery, for this disease and malaria were largely responsible for the surrender of our forces at Bataan. Bacillary dysentery is a serious military problem, particularly since the present conflict involves areas which have always been hotbeds for the propagation and dissemination of the disease to our country and throughout the world. During the first World War, the average period of invalidism due to bacillary dysentery for the British soldier in the Near

By JOSEPH FELSEN



H. Armstrong Roberts

Food handlers are frequently agents for the transmittal of dysentery. Periodic examination for possible infection of such personnel should be compulsory

East was 141 days. Moreover, for every sick soldier there were perhaps four others required to take care of his medical and other needs. The disease usually attacks large numbers simultaneously under conditions of active warfare, so that important combat or supply groups may be rendered completely ineffective within twenty-four to forty-eight hours. As Zinsser has so aptly stated in his book, "Rats, Lice and History": "Epidemics get the blame for defeat, generals the credit for victory." This statement reflects the previously expressed opinion of Shiga, the Japanese scientist who discovered the dysentery germ, that bacillary dysentery was "more fatal to armies than powder or shot." Our medical and line officers recognize this ever present danger and bend every effort to avoid it. General Joseph Stillwell, commander of the American forces in China and Burma, speaking of the advantages of modern winter warfare stated that "malaria, dysentery and other ailments and diseases plaguing an army in the field, often taking greater toll than bullets, shells and bombs, lie dormant in the wintertime." The average soldier will not go out of his way to drink heavily chlorinated water any more than the average layman will take the trouble to see how clean his favorite restaurant kitchen is. The result is that contaminated water not rendered safe by boiling or chlorination is often used; on leave, the soldier eats in restaurants of questionable cleanliness. The danger is further enhanced by the present paucity of help so that carelessness in the handling of food and in the examination of food handlers is rampant.

What has been said about bacillary dysentery applies equally well to the salmonella infections. We know the germs that cause these diseases and the methods for preventing them in both civilian and military life. This brings us back to food, fingers and flies. The solution lies in the use of heat, cleanliness and the eradication of disease-breeding foci. The simplest and most effective method of sterilizing food is by boiling. The typhoid, dysentery or salmonella germs in water will not survive ten minutes of boiling. Most people do not like boiled water, even though as babies they drank it and thrived. The slightly insipid taste is due to the driving off of oxygen by the heat. The natural taste can be restored in large measure by merely permitting the boiled water to remain over night before drinking. The British overcome the difficulty *(Continued on page 540)*

By FREDERICK M. ALLEN

WAR AND THE Antivivisection RACKET

The enemies of animal experimentation would obstruct life-saving scientific progress, Dr. Allen says in this article on antivivisection

THE enormous life-saving results of animal experiments as applied to war conditions cannot be clouded, nor can the benefits be falsified as they have been in regard to the more complex studies of many diseases. There was a time when the value of animal experiments appeared questionable even to some physicians, and when many poorly informed writers rushed in with eloquent denunciations of the supposed cruelty. A collection of such misleading excerpts is published by the Vivisection Investigation League under the title, "Vivisection According to Representative People." The following gem from Minnie Maddern Fiske will illustrate the general tone of antivivisection propaganda: "There are some phases of immorality so dark that men speak of them in whispers or do not speak of them at all. Vivisection is one of these phases of immorality. No prisons, no death cells, no obscure haunts of vice have ever sheltered beings who have so perfectly achieved the annihilation of the common sense of mercy as the vivisectors have achieved it. All cruelty to helpless things is cowardice, but to my mind the exquisite cowardice of the vivisector is the most perfect thing in immorality that the mind of man can conceive."

This actress's estimate of the mind and morals of such men as Pasteur may be matched by a quotation from the notorious professional antivivisectionist, Miss Lind-af-Hageby: "The whole system of animal experimentation is an outrage on civilization, tolerated only because of the ignorance of the people and the false hopes of freedom from disease and prolongation of life raised by vivisection. . . . At the present time orthodox medicine is enmeshed in theories based on vivisectional experiments, the absurdity and uselessness of which will cause future generations to pity the blindness and stupidity of our age."

These words of enlightenment were uttered in 1923, one year after Banting's "vivisectional experiments" had produced insulin, a discovery which could not possibly have been made by any means except animal experiments.

The reckless charges of cruelty are explainable by hysterical imagination and distortion of medical literature. It is true that experiments disturb health. A dog may be bled painlessly or thrown into surgical shock under anesthesia, but subsequently there is weakness, depression and death. Charges of special or wanton cruelty have been abundantly disproved, and anybody who argues that it is inhumane to save human lives by studying similar conditions produced in animals will not get a large following.

The crux of the argument, therefore, concerns the benefit or necessity of animal experi-

mentation. Here is found the essential and most reprehensible dishonesty of present day antivivisectionists, because they uniformly conceal the fact that this question is no longer open. The discoveries of modern medicine have transformed life. It must be regarded as pitiable conceit when some petty actress, writer or other layman attempts to instruct or denounce men who are recognized as authorities and benefactors throughout the civilized world. It is pernicious and it endangers lives when antivivisection literature continually denies the value of aseptic surgery, serums, vaccines and all other medical methods that were discovered through animal experiments. It is not a mere case of ignorance and shameless vituperation on the part of a few benighted fanatics. The integrity of the "intellectual" leaders is involved. Antivivisection literature is self-evidently composed for the purpose of arousing horror and not of telling the truth. When ignorant fanatics among the membership of any reputable political or religious organization spread palpably false defamation of their opponents, the responsible leaders are compelled to disavow such utterances for fear of forfeiting public respect. Although the antivivisectionists always claim to have physicians and other informed persons among their members, the intelligent leaders have never once been known to correct the blatant falsehoods and distortions in their literature.

In undertaking to clear up the muddle which has been artfully created in the public mind, we may ask certain questions: Are these quotations actually fair examples of antivivisection literature? Anybody who will take the trouble to go to any large public library and look through the books, pamphlets and magazines published by antivivisection organizations can answer this question in the affirmative.

Who are the "vivisectors" who are so vilely denounced? The isolated pervert who tortures animals for the sake of some fiendish pleasure or delusion is a myth. If he existed, all medical organizations would join in exposing and suppressing him. The "vivisectors" who are depicted as "degenerate doctors" and inhuman monsters are the staffs of all medical and scientific institutions conducting animal experiments. They are the recipients of the Nobel prizes in medicine, the makers of the great life-saving discoveries of medical science, together with all the obscure workers who build up the great mass of biologic knowledge out of which the great discoveries arise.

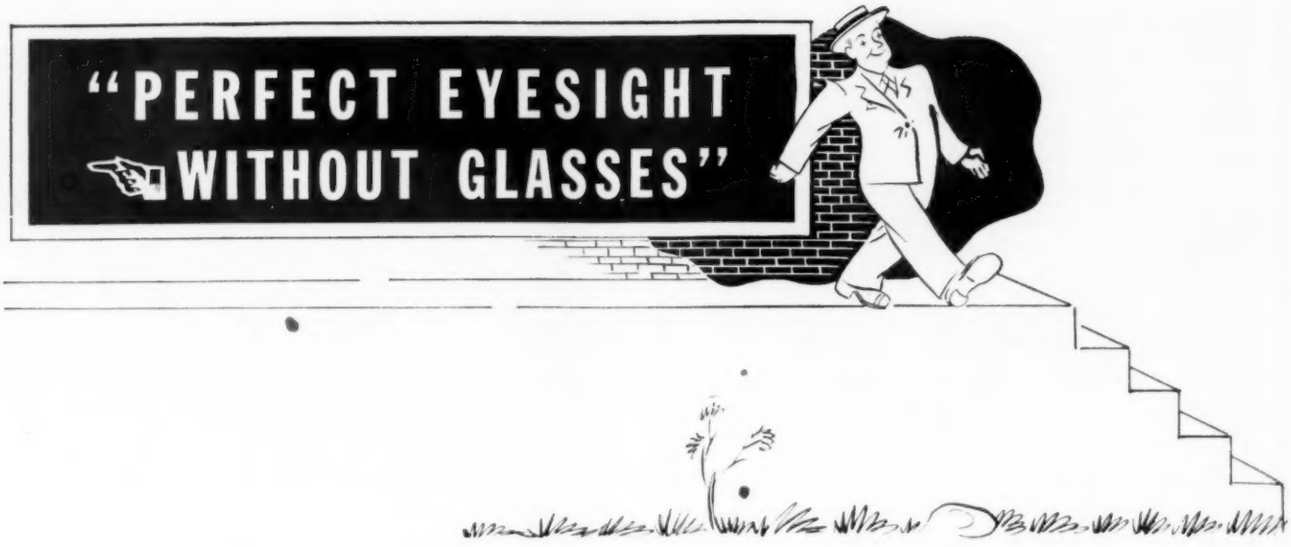
Who favors or supports "vivisection"? It is supported by every great medical foundation and research institution. It is carried on by every medical school and university. Laboratory animals or the products obtained from them are used by every public health service, every city, state, national and military medical department and every fully equipped hospital in the entire world.

Who are the opponents of such beneficent work? At the top they include writers like Bernard Shaw, movie stars of the type who recently supported an attempt to prohibit animal experiments in California and a host of similar persons who have general intelligence but no knowledge whatever of medicine or related sciences. They range downward to a rabble of cranks, neurotics and morbid dog or cat worshipers. There was a time long ago when physiology, bacteriology and all the other sciences which depend on animal experiments were new and debatable. Claude Bernard, Pasteur and other pioneers had strong, reputable opponents, and physicians made statements against this experimentation which are still quoted by the antivivisectionists as though they were up to date. It can be affirmed broadly that no competent physician or scientist in the world today is opposed to the use of animals and the products and knowledge derived from them.

What power do the enemies of science wield, and why? Through their fanaticism and their close organization they control nearly every "humane society" together with the extensive police powers which these exercise. Their political power is evidenced by the laws which restrict animal experimentation and the recurrent dangerous movements to suppress it. They control the public pounds in all American municipalities—with only a few exceptions. New York City illustrates the nearly universal anomaly; it spends large sums to buy laboratory animals for its institutions, it slaughters thousands of animals in its public pound uselessly, and it is not allowed to use its own condemned animals in its own institutions!

What harm is done by the antivivisection campaign? Research institutions are notoriously starved for funds, and they are taxed heavily by being forced to buy dogs and cats from dealers instead of getting them at minimal cost from public pounds. The extent of the actual stopping of research can be judged by examples from my own small experience. Several years ago my *(Continued on page 532)*

"PERFECT EYESIGHT WITHOUT GLASSES"



A thousand dollar gift was offered for proof that this widely advertised "system" ever cured a real eye defect. Yet the money was never claimed!

By MEYER WIENER

RECENTLY Aldous Huxley, the noted English author, wrote a book on the Bates system for curing eye defects and errors of refraction by exercises. Thus was revised the old system that was promoted with the slogan: "Throw away your glasses and have perfect sight!" While this "system" has been lying relatively quiet in most parts of the country, it has flourished in California. There are many explanations of the facility with which various forms of quackery thrive in the Golden State. Some say it is just youth plus the large colony of movie stars, and the notoriously emotional atmosphere of the motion picture colony.

Dr. William H. Bates first advertised his method about thirty years ago in New York City. Bates was graduated from the College of Physicians and Surgeons of New York in 1885 and licensed the same year. Newspaper announcements record that in August 1903 Dr. Bates mysteriously disappeared from New York City. Two months later he was found in London, England, "acting as an assistant in a hospital." He is alleged to have given two explanations for his disappearance. One was that he had been called to operate on a sailor and that, while doing this, the ship sailed away. The other was to the effect that he left New York suffering from amnesia. Two days after having been found in London, he again disappeared, and his name did not again appear in the newspapers for nine years. In May 1911 the papers reported that one of his friends had "found him in Grand Forks, N. D., quite accidentally" and had persuaded him to return to New York. While the newspapers gave the impression that Dr. Bates' whereabouts was unknown from 1903 till 1911, medical directories show that he was in Grand Forks from 1904 to 1910, inclusive.

He began his fantastic claims in 1911, when his first published article appeared on the prevention of myopia (nearsightedness) in school children by having them focus on the Snellen chart for distant vision. The following year he published an article claiming that myopia was not caused by an effort to read in poor light but by an effort, usually unconscious, to see distant objects. The article supported his claim that "functional myopia" is an early stage of myopia with *elongation of the eyeball* under the influence of effort to see distant objects. This elongation of the eyeball, he

said, is not permanent. In 1920 he published his book entitled "The Cure of Imperfect Eyesight by Treatment *Without Glasses.*" In this book he claims to be able to cure all children under 12 who have never worn glasses and many children and adults who have worn them. Persons with minor defects of vision can cure themselves, according to Bates.

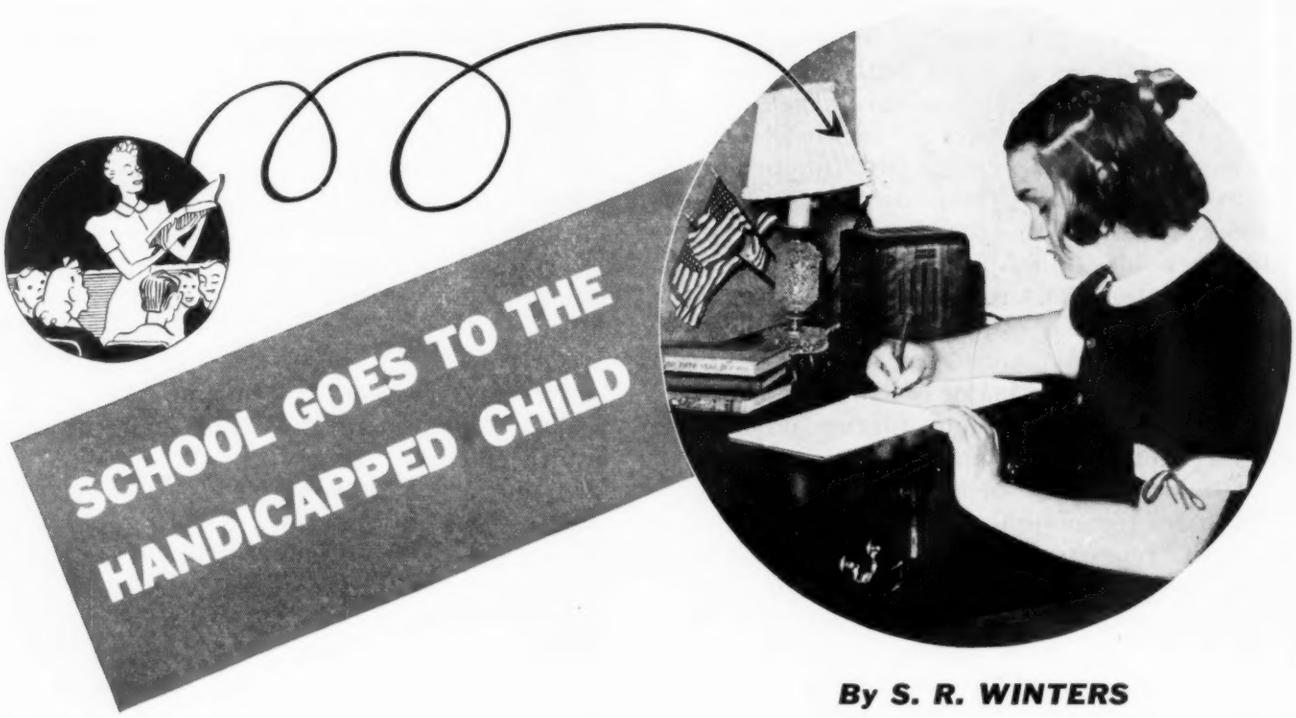
In his book, Bates pretends to prove that accommodation for nearness, or the focusing of the eye for near objects, is not due to the action of the ciliary muscle on the lens within the eye, but to the action of two of the external muscles, the superior and inferior obliques. He shows pictures of fish eyes with supposed changes in the length of the eyeball caused by traction on the oblique muscles. In the first place, the photographs do not show what he claims they do. Moreover, the oblique muscles have an entirely different function in fishes from that in the higher mammals. An examination of fishes reveals that the original, primitive function of the eye muscles was not to aim the eyes at objects at all. Rather, they were reflex and involuntary muscles, designed to give the eyeball the attributes of a gyroscopically-stabilized ship for the purpose of maintaining a constancy of the visual field despite chance buffetings and twistings of the animal's body by water currents. With fishes, moving objects are never kept in view by movements of the eye; having no neck, the fish turns the whole body or bends to face the object and keep it in the binocular field. These wheeling movements can be seen clearly in aquariums: as the fish tilts its body to swim upward or downward, the eyeball makes a compensatory rotation in the plane of its equator, this movement being carried out by the two oblique muscles.

Bates' contention is that the ciliary muscle, which regulates the convexity of the lens, has nothing to do with the focusing of the eye. Yet this change in the curvature of the lens is definitely proved by observation with the slit lamp and corneal microscope. Too, the astigmatism of the cornea can be accurately measured, during either rest or accommodation, with precision instruments such as the ophthalmometer and found to be constant. All these measurements are made with mathematical accuracy by instruments and precise means which no scientific investigator could possibly question.

There has never been any dispute among scientific eye doctors or students of physiologic optics about the ciliary muscle and the crystalline lens being the sole factors in the changes of the focusing of the human eye for near and far vision, even though there may have been some difference of opinion as to exactly how this was brought about. The normal structure of the eye, in which the sclera or white portion is firm and resistant and the cornea or covering is rigid with the constantly maintained intraocular pressure, effectively guards the eye from any disturbing influence by pulling of the muscles.

Bates got a great deal of publicity when Bernarr Macfadden, the "physical culture" faddist, collaborated with him in turning out what purported to be a "New Course of Eye Training," heavily advertised in *Physical Culture,* a sheet whose advertising pages have reeked with quasimedical freaks, fads or fakes. Later, Bates published *Better Eyesight,* a monthly magazine devoted to the "cure of imperfect eyesight without glasses." At the time, people questioned whether Bates was dishonest or just plain crazy. They decided that he was not crazy. One specialist in diseases of the eyes offered each patient with defective eyesight due to organic change a gift of $1,000, to be paid to any organized charity he might name, providing he returned, after Bates' treatment, showing improvement either in sight or in refractive error. The specialist never had occasion to pay out any of this money.

Many people do not wish to wear glasses. Many times glasses are prescribed for temporary use and can be discarded by the wearer as soon as his general physical condition improves enough for him to overcome his slight error without undue effort. Again, unfortunately, some people are given glasses to make a sale. These people would be "cured" by the Bates system, or any other suggestive, therapeutic measure. Then there is another class of people who really do have a definite physical defect which lowers vision, who are nervous and temperamentally highstrung; they are often relieved of their worry and anxiety through psychic effect. The great danger lies not in the fact that the unsuspecting public is mulcted of its money but in the fact that there are eye diseases, such as glaucoma, optic nerve atrophy or blindness due to pressure from brain tumor, in which untold and permanent harm can be done by delay in diagnosis and proper treatment, whereas sight could be saved if a competent eye physician were consulted in the beginning.



By S. R. WINTERS

IN SHAKESPEARE'S ERA, children "trudged unwillingly to school"; in modern times they travel comfortably by bus; in ultra-modern days in Iowa, the classroom goes to the home of the semi-invalid child by means of an intercommunication system.

Operating on the same principle as a telephone or an ordinary interoffice communication arrangement, this Iowa device provides a two-way teaching plan which enables the physically handicapped child to recite by remote control. Remaining at home, the child hears the recitations carried on in the classroom, is called on to recite in his turn and is heard clearly by teacher and classmates. Three of the pupils using this system are leading their respective classes. One invalid pupil was elected president of his class.

The idea originated with the Department of Public Instruction at the suggestion of W. A. Winterstein, staff statistician, and the first set was installed in the Newton, Ia., schools under the supervision of Superintendent B. C. Berg in September 1939. A girl student, a high school junior, was just out of a hospital and expected to be confined to her bed or her room for the entire school year. The teaching system was installed for the girl's use, and she made such progress both scholastically and physically that she was able to return to school at the end of the semester.

Public interest was definitely aroused. A telephone employee in Newton prepared a set for the use of his fifth grade daughter who suffered from a form of paralysis. Soon other young people in the Newton schools procured sets. The success of each was immeasurable, and the experiment spread to other school systems.

At present, more than seventy sets are in use, serving approximately one hundred pupils in various Iowa school districts. The installations range from a set in a one room rural school that brings instruction to a sixth grade boy, the victim of extensive burns through contact with an electric transmission line, to a city system that serves seven shut-in pupils. Forms of disability from which such pupils suffer include cardiac and pulmonary troubles, broken backs, infantile and spastic paralysis—in short, all the physical injuries with which youth may be afflicted. In most instances the service will necessarily be continued until high school graduation, but in three cases, recovery of the pupil has permitted the release of the equipment for use elsewhere.

The cost of equipment, adjustments and installation has been approximately $40 per pupil served. As additional pupils are provided for, the average cost decreases. The leased wires between classroom and home cost the school district $1.25 a month for the first quarter mile and 75 cents a month for each additional quarter mile. The state reimburses the district which procures intercommunication equipment *(Continued on page 524)*

TAXES TO BE REPAID WITH INTEREST

Purchase of United States War Bonds is a vitally necessary and uniquely desirable form of self-taxation—Necessary to help pay the gigantic cost of our war effort; Desirable, because these taxes will be repaid in full and with interest.

Put at least Ten Per Cent of your income in War Bonds and

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IT IS NOT ONLY PATRIOTIC, BUT THE PLAINEST COMMON SENSE TO INVEST IN UNITED STATES WAR BONDS

This space is donated by Sharp & Dohme, Pharmaceuticals and Mulford Biologicals, Philadelphia, Pa.

WHO should exercise . . . and WHY

LIKE OUR ARMED FORCES, civilians, too, must keep fit for their part in this war. This means adequate sleep, rest, recreation, a nutritious diet—and *exercise*.

Everyone in good health should take some form of exercise—the type depending upon age, strength and occupation.

Proper exercise strengthens the muscles which hold us erect and in good posture. It stimulates the circulation and keeps the heart and lungs in prime condition. It helps us avoid putting on excess weight. Digestion and elimination are improved . . . vigor and endurance are heightened . . . we have that feeling of being in "the pink" of condition.

In short, proper exercise helps us *live* longer! Meanwhile, we get keener enjoyment out of everything in life.

Generally, some form of exercise which may be continued the year round is preferred. Moderate *regular* exercise is far better than too much at one time.

Any exercise is more beneficial out of doors. The tonic effect of fresh air and sunshine is great. Wisely taken, exercise should produce a pleasant exhilaration—not undue fatigue and aching muscles.

Desk workers and those who do light manual work—sitting or standing at a machine, for example—need exercise to keep them limbered up. Workers whose jobs demand great physical exertion need *recreation* more than "muscle building." They should seek sunshine, rest and fresh air in their leisure time.

If regular checkups show us to be sound, we are never too old to benefit from some form of exercise. This year, millions of Americans are getting splendid exercise through their Victory Gardens. If you are one of these, Metropolitan will send you upon request a free booklet, 73-Z, "Keeping the Garden Going."

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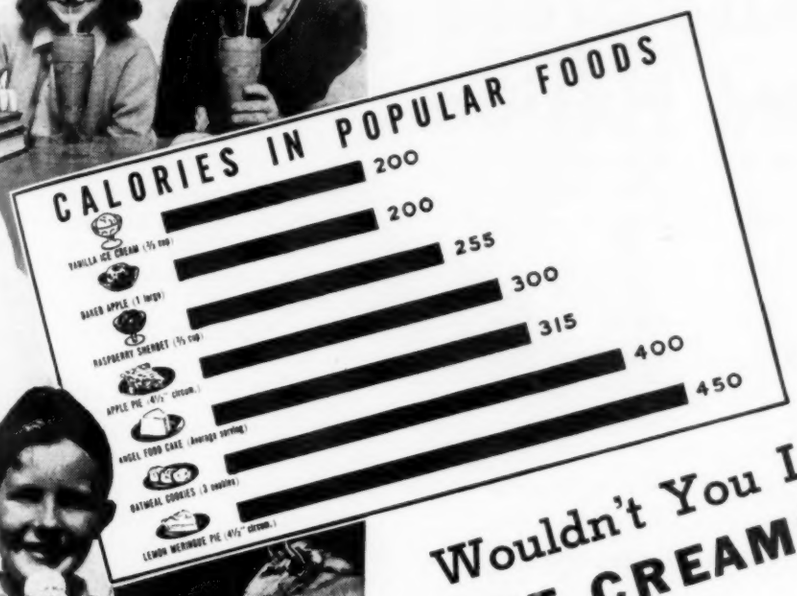
SULFA TREATMENT OF IMPETIGO

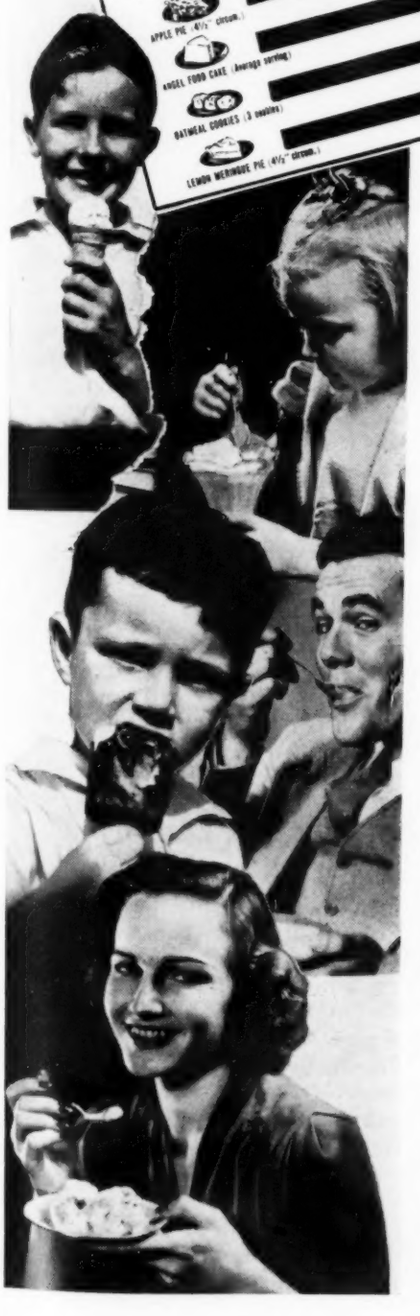
A single application of a new physical form of the sulfonamide drugs in the treatment of impetigo contagiosa, a pus producing skin infection caused by staphylococci, has, from his experience with the method thus far, been found to cure the condition within a day and to stop the spread of the disease, T. N. Harris, Philadelphia, reports in *The Journal of the American Medical Association.*

He says that the basis for a rational improvement in the treatment of impetigo by local application of the sulfonamides was provided by Leslie A. Chambers and his associates in a report previously published in *The Journal.* Chambers and his associates announced the development of a procedure which reduces the crystal size of sulfathiazole into what they term microcrystals. The author says that this method yields a stable suspension of fine crystals of sulfonamide and that the drug remains stable in pure water for at least many months. "This last property presents an important contrast to the behavior of a crushed ordinary sulfonamide compound, which settles and cakes when suspended in water," he explains. "Finally, when allowed to dry, the suspension becomes a fine . . . powder. . . .

"In the present study a 20 per cent suspension of microcrystalline sulfathiazole was used. . . . A drop or two of the suspension was poured onto a small gauze dressing. It was found that the water would seep into the few layers of gauze to a greater extent than did the crystals. This would concentrate the sulfonamide crystals on the surface of the dressing, leaving a small white collection of pure sulfathiazole in water, of the consistency of fresh mud. The actual treatment consisted simply in applying the dressing thus prepared to the skin, the bit of sulfathiazole paste being placed in contact with the lesion. The only preparation of the area was washing with ordinary soap and water, with removal of all the crusts. . . . One small dressing was applied to each lesion.

"On removal of the dressing twenty-four hours later, the lesion was always found to be healed. . . ."





Wouldn't You Like to Know About ICE CREAM?

By ETHEL AUSTIN MARTIN

NOTHING is so thoroughly American as ice cream—America's favorite dairy food. The commercial production of ice cream began about 1850 and the industry expanded rapidly after the introduction of the ice cream cone at the St. Louis World's Fair in 1904. In the past thirty years the annual production of manufactured ice cream has grown from 120,000,000 quarts annually to approximately 1,600,000,000 quarts in 1942.

As the nutritive value of ice cream has become better known, greater appreciation of its significance as a food has been evidenced in increased consumption. Laboratory research on flavors, texture and sanitary control; progress in methods of refrigeration; freezer invention; and improvements in distribution have all been important factors in this remarkable increase. Further, of course, the different combinations in which it is sold at soda fountains and the many ways which have been found to use ice cream in the home have contributed to the increase.

Some idea of the magnitude of the ice cream industry is gained from the fact that the product of more than one million cows annually goes into the manufacture of ice cream! More than six billion pounds of milk were needed for the cream and milk solids to make the millions of quarts of ice cream consumed in the United States last year.

It is scarcely necessary to point out that any food using this tremendous amount of milk is nutritious and wholesome. But that is not all. The manufacturers of ice cream use each year, in addition to the milk, many million pounds of fruits and nuts, which add considerably to the food value of ice cream. To give you some idea of the quantities of the different kinds of fruits and nuts used in ice cream, here are the amounts purchased by ice cream manufacturers in 1941:

Fruits	Pounds
Strawberries	30,646,030
Peaches	13,034,164
Pineapple	4,824,022
Raspberries	5,703,599
Cherries (Maraschino)	1,509,181
Cherries (Other)	5,601,550
Bananas	1,141,448
Lemons	602,788
Oranges	8,759,783
Total Fruits	71,822,565

Nuts	Pounds
Almonds	143,957
Pecans	7,442,870
Walnuts (English)	513,850
Walnuts (Black)	552,341
Pistachio	120,197
Total Nuts	8,773,215

Cream, milk and milk solids, sugar, and sometimes eggs, form the basis of all ice cream. The typical proportion of ingredients in the basic "mix" is about this ratio: 80 per cent cream and milk products, 15 per cent sugar, 4.5 per cent flavor and 0.5 per cent edible stabilizer.

Under the present rationing system, the amount of sugar allowed for making ice cream has been reduced. In order to retain desirable sweetness, the manufacturers are using from 20 to 40 per cent of their sweetening in the forms of "corn sugar sweeteners." The use of sugar

★

Enriched White Bread in a Rationed Nation

★

We in America can well give a prayer of thanks for the bounty of our great prairie states and the abundance of grain they grow for us.

For, made into good white bread, there's a wealth of energy that comes from that grain—all the more nutritious now that white bread is enriched with certain vitamins and minerals*—nutrients required for our all-out wartime effort.

Our meat we must share with our fighting men and allies. Our sugar has been rationed. Canned goods are becoming less as the war lengthens, and many other foodstuffs will soon be gone from the grocer's shelves.

But of bread—enriched white bread—there is plenty for all. Plenty for the dinner table. Plenty for the dinner pail of the men who need their strength to make war goods. Plenty for the school lunch box, the after school snack, before-bed supper. Eat bread—enriched white bread—without stint. Eat many, many, slices a day. There's energy in every slice—and victory in energy.

* Thiamine, niacin, and iron.

Department of Nutrition

American Institute of Baking

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in ice cream appears to be justified in light of the thinking of nutrition authorities in this country. The Food and Nutrition Board of the National Research Council recommended recently: "That the use of sugar where small percentages make more nutritious foods, such as bread and dairy products, more appetizing, deserves high priority and should not be restricted." In general, it is the position of the Food and Nutrition Board that sugar should be added to foods which contribute to the adequacy of the American diet, and in this position the Council on Foods and Nutrition of the American Medical Association concurs.

A small amount of edible stabilizer is sometimes included by ice cream manufacturers to prevent the formation of gritty ice crystals. Pure food gelatin is often used for this purpose. One half of 1 per cent gelatin is used—which amounts to about 1 teaspoon to a quart.

Automatic control of the whipping process in freezing ice cream produces uniform consistency. Air is a necessary ingredient of ice cream. Without it we would have a solid, frozen mass. The principle of adding air to ice cream is similar to that followed in the kitchen when air is beaten into eggs or batters. Yeast is used for the same purpose in making bread. Ice cream without whipping would be like bread that has not risen. Whether ice cream is made in a home freezer or in a factory, the addition of air is necessary to produce a palatable product. Laboratory research has established the amount of whipping that produces the most acceptable ice cream.

Modern manufactured ice cream is made under the most carefully controlled sanitary conditions. It can truthfully be said that as much time is expended in cleaning and sterilizing the ice cream plant equipment as is required for making the ice cream itself. For the protection of the consumer, when the ingredients have been put together, the ice cream mixture, known as the "mix," is pasteurized before freezing. Careful laboratory control is exercised through every step.

More vanilla ice cream is made and sold in this country than any other flavor. In an effort to furnish exact information on the dietary value of specified amounts of vanilla

ice cream, the National Dairy Council has calculated the food value of an average vanilla ice cream mix. The Bureau of Dairy Industry of the United States Department of Agriculture supplied the formula. Standard texts on nutrition were used as sources for the food values of the various ingredients of the ice cream. The food values evolved from these calculations are shown in the accompanying table.

Ice cream compares favorably in food value with other popular foods. Although it is relatively low in calories, ice cream is a good source of food energy and is high in protective qualities, particularly vitamin A, protein and calcium in comparison with other foods which usually are served in its place in meals. Ice cream is a good choice for those who must refrain from eating concentrated energy foods.

Vanilla Ice Cream	Calories	Protein Gm.	Calcium Gm.	Vitamin A I.U.	Thiamine Mg.	Riboflavin Mg.
1 gal.	4,806	93.0	3.143	8,129	0.919	2.490
1 qt.	1,202	23.2	0.786	2,032	0.230	0.624
1/6 qt.	200	3.9	0.131	399	0.038	0.105

An interesting comparison can be made between the one-sixth quart serving of ice cream and one glass of milk. A serving of ice cream yields on the average about thirty more calories and about half as much protein and calcium as a glass of milk. The facts regarding protein and calcium are particularly significant in view of the fact that they offer evidence that ice cream contains considerable milk solids, not fat, which the average consumer doesn't realize are in ice cream. The calcium in a one-sixth quart serving of ice cream furnishes about 17 per cent of the adult total daily need for calcium. To those acquainted with the relative contribution of different foods to the calcium requirement of the body, this will be recognized as a substantial amount. As a matter of fact, when a comparison of the amount of calcium provided by a serving of ice cream with quantities of other foods yielding the same amount of calcium is made, the result is not only interesting but somewhat startling. To obtain the same amount of calcium from fruits, vegetables or eggs, which are often selected as supplementary sources of calcium, it would be necessary to eat four large eggs, or one-half head of cabbage, or two and one-half oranges, or nine potatoes, or nine carrots!

According to reports from many studies of American diets, calcium is one of the food elements often lacking. It is therefore important to include calcium-rich foods in meals whenever possible. Ice cream serves a useful purpose in this respect. Especially is it true at this time when a scarcity of foods requires that each one contribute maximum food value.

On the other hand, when a high caloric diet is desired, ice cream with cookies, pie or cake helps raise the food value of the meal in almost every dietary essential. An average serving of vanilla ice cream supplies 200 calories. A serving of apple pie contains 300 calories, angel food cake has 315 calories, and lemon meringue pie furnishes 450 calories per serving. The war effort in its different phases has made heavy demands on the ice cream industry. In army camps, the master menus of the Quartermaster Corps specify ice cream on the average of two or more times a week. In the Navy, ships putting out to sea are well stocked with ice cream. An ice cream manufacturer on the eastern seaboard recently related that while a cruiser was anchored in the harbor nearby, his plant supplied 340 quarts of ice cream to the vessel daily. Reports from Army Air Forces training schools indicate that ice cream appears on the dinner or supper menu every day in certain schools.

Industrial plants with their stepped-up schedule of war work and their increased number of employees are using great quantities of ice cream. The same qualities in ice cream which commend themselves to wartime activity hold true for restaurants, air lines, hospitals and homes at any time. With shortage of personnel and restrictions on foods, ice cream is proving a boon to managers of all types of public eating places and institutions. It can be served with practically no effort and with assurance of its acceptance, whereas the preparation of other desserts may be curtailed because of lack of ingredients or insufficient kitchen help.

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Cap included for refrigerator and travelling
SANIT-ALL PRODUCTS CORP., GREENWICH, OHIO
Baby-All NATURAL NURSER SCREW-ON BOTTLE NIPPLE & CAP

BRING YOUR FIRST AID UP TO DATE

(*Continued from page 493*)

fact, he began to pour blood. He jammed on the gas; she did her best with the tourniquet. But it was no use. He collapsed just as they reached the next small town, and an ambulance had to bring him on to the hospital.

A physician was at his side within minutes, but it was almost too late. The victim's pupils were widely dilated and he was barely breathing. His clothes and those of his wife were saturated as if they had been dipped in a tub of blood. Frantic efforts—blood serum, followed quickly by a blood transfusion, together with oxygen and stimulants—brought him around. But he nearly died from that "insignificant" cut, so small that gentle pressure from the tip of the doctor's little finger was sufficient to stop the hemorrhage from it.

You see, the misguided wife had twisted her tourniquet just tight enough to compress the veins and thus stop the *venous* return from the arm, but not tight enough to shut off the *arterial* flow into the arm. As a matter of fact, that is exactly what we do when we take blood for a transfusion. This naturally causes a heavy escape of blood, and the lady bled her husband white in a short time. *If you ever employ a tourniquet, make certain that it is placed properly and that it is tied tightly.*

As soon as possible, the doctor would take steps to save the injured from shock—that dangerous derangement of the body mechanism that always accompanies major injuries and may even arise from minor ones. The state of shock has a tendency to perpetuate itself and if it is not interrupted may produce death, even though the injuries are not, in themselves, dangerous.

The treatment would require but seconds. The doctor would turn each patient on his back and place his head lower than his body. He would then cover each with a coat or anything available to keep him warm. Not a lot of treatment, to be sure, but it accomplishes much.

Compare this roadside treatment with that usually administered in a hospital. Every nurse and every intern is taught to quiet the patient and relieve his pain; see that his head is considerably lower than his feet; give him stimulants and oxygen; and give him intravenous saline solution, blood serum, or whole blood.

There by the roadside you can do several of these things. How many can be done in a careening car? Probably none! So the doctor would await the arrival of ambulances even though that required a considerable time; he would obey that wise injunction: *Let them lie!*

In treating the burn victim the doctor would follow another excellent piece of advice the medical profession so often gives the public: *Regardless of how much pain a patient suffers, use no home remedies on his burns if they are bad enough to require professional attention.*

FIRST AID

The American Red Cross says: "The work of the first aider stops where the doctor's begins."

Burns must be freed of dirt just as are all other wounds. What a job that is when a liberal smear of a salve or grease covers them! Here is a typical example: Recently a truck driver with a terrible burn was rushed to a hospital. Burned clothes and caked filth plastered his body, and over that was a thick layer of axle grease. A full bucket of the dirty black stuff encased him. "If I hadn't remembered that can of grease I don't know what we'd have done," his partner told the doctor with sadly mistaken pride.

They cleaned him for half the night, but still he got a deep-seated, widely spread infection that killed him several weeks later. Did that grease contribute to his death? It is probable.

The doctor would take especial care in moving the unconscious man. He would fear that the poor fellow might have a broken back, and although he saw no signs to support his fear, he would turn the man over on his face, and assigning one helper to the shoulders and another to the legs, he would have the victim lifted and carried face down. In this rigid position back vertebrae cannot become displaced even though they are broken.

When a back is broken and the patient is bent forward the broken fragments jackknife on the soft spinal cord, crushing it. Now a spinal cord has not the ability to heal itself, so the victim is permanently paralyzed from the point of the injury down. He may or may not live to face his paralysis.

Here is a case in point: Sandy was a football player. Friends pulled him out of an automobile wreck and insisted that he try to walk. He was groggy, and despite his pain he tried to comply. Several times they dragged him to his feet, although his broken back was buckling at every attempt. Sandy is still alive and wonderfully cheerful, but he is no longer active physically, for he is completely paralyzed from his waist down.

The doctor would not ignore the broken arm of the victim in our car wreck. He would fear that if it were allowed to flail about, the broken bones might injure nerves and blood vessels, so he would have one helper grasp the hand and pull strongly and steadily on the injured limb. Never for an instant would the pull be slackened during the trip to the hospital. Thus the patient would be protected from further injury and shielded from further shock. If he were conscious, this maneuver would also greatly reduce his pain.

Our physician would make a last demand on any helpers. He would insist that they drive slowly and carefully on the way to the hospital. He would know that few die because they arrive at hospitals too late, but many lose their lives in the rush to get there.

As it is actually practiced by experts, real first aid is not composed of complicated bandages or tourniquets; nor does it include panic. It is made of nothing more than common sense, which fortunately you can exercise just as surely as can any physician. You need no special equipment or highly technical knowledge; you need only think out your every action long beforehand, so that when the day of accident arrives, excitement will not scatter your wits beyond recall.

Meat . . .

What Kind? How Much? And How Often?

AMERICA must emerge strong at the end of this war. Only a strong nation can win and command the peace. Good nutrition, adequate in all essentials, is of primary importance to national strength.

Meat makes three basic contributions to good nutrition: it is a protein food of highest biologic value; it is a source of essential vitamins and minerals; it stimulates the appetite, thereby aiding in sufficient consumption of all needed foods.

The demands of our armed forces and those of our allies must come first. Hence not all kinds and all cuts of meat can be available every day. Thus, under rationing, these questions arise: What kind of meat, how much, and how often?

All meats—beef, pork, veal, lamb, sausage, and variety meats—all make their three basic contributions to good nutrition. With minor variations all cuts of meat do, the new unfamiliar ones as well as the old stand-bys. Learn how to prepare the new ones—they can be done as deliciously as the older ones. All bring you protein of highest quality, B-vitamins (thiamine, riboflavin, niacin) and minerals (iron, copper, phosphorus). Since these nutrients are essential to good nutrition, and since the body does not store them to any appreciable extent, they must be supplied in the daily foods.

How much meat? 12 of your 16 red stamps each week for meat is a sound recommendation. Since meat is so rich in protein, it will thus provide fully two-thirds of your protein needs. Fish, fowl, eggs, cereals, milk, cheese, and the legumes will help round out the balance.

How often? Medical and nutritional scientists are agreed that it is better to distribute your meat over the week, the noon and evening meals of each day, than to use it up in two or three big meat meals during the week. When so many foods are curtailed or not available, it is the more imperative that every meal be tempting to the appetite. This point is as important to good nutrition as the food value of the meal itself. When meat, well prepared and tasty, is the keystone of the meal, the appetite responds, and the meal is eaten with relish.

Today more than ever, meat—regardless of kind or quantity—should be the central point of your meals.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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The National Nutrition Program

(*Continued from page 501*)

The nutrition in industry division is an integral part of the national nutrition program. It constitutes one of the two major steps taken in the effort to tie the national nutrition program closely to the war effort. The other major step is the adaptation of the program to serve as a prime force in promoting willing acceptance of rationing and an equitable distribution of available foodstuffs compatible with the maintenance of good nutrition.

The nutrition in industry section functions mainly through the organization set up for the implementation of the national nutrition program, that is, through the regional nutrition representatives and the state and local nutrition committees. Arrangements have been made for the appointment of industrial nutrition representatives in each region.

Approximately one third of the state nutrition committees have formed subcommittees on nutrition in industry. It is expected that the remainder will rapidly follow suit. The membership of the subcommittees on nutrition in industry quite generally includes representatives from health departments and their industrial hygiene divisions, industry and industrial organizations, industrial physicians, labor, labor departments, food producers and merchants, caterers, service clubs and newspapers, in addition to nutritionists. Both the regional representatives and the representatives of the nutrition in industry division of the Food Distribution Administration are ex-officio members of the nutrition committees and their subcommittees on nutrition in industry. The subcommittees are extremely useful as they provide the nutrition committees with a direct contact with those groups in the state and community who are in a position to implement their recommendations. Such subcommittees are also frequently eminently qualified to define the needs of industries and war workers in their communities.

In addition to the organization set up for the national nutrition program, the nutrition in industry division of the Food Distribution Administration has an arrangement with the Industrial Hygiene Division of the United States Public Health Service and the Ordnance branch of the United States Army whereby an inspection of meals, feeding conditions and requirements is to be included in industrial hygiene surveys of army ordnance plants. Reports prepared on nutrition conditions in army ordnance plants are transmitted through the Industrial Hygiene Division of the U. S. Public Health Service to the army ordnance headquarters in Chicago as integral parts of the regular industrial hygiene reports. Copies are also furnished the regional nutrition representatives concerned. The regional nutrition representatives are requested to take whatever steps may be indicated to remedy community feeding problems about such ordnance plants.

Dr. Townsend, Chief of the Industrial Hygiene Division of the U. S. Public Health Service, has informed the nutrition in industry division of the Food Distribution Administration of the close relationship which exists between his division and the various state industrial hygiene departments. As the "in-plant" feeding problem logically belongs in the field of industrial hygiene, Dr. Townsend has requested that the state industrial hygiene officers be kept informed of and be asked to participate in nutrition in industry programs within their states. This matter has been well taken care of by those state nutrition committees which have made the state industrial hygiene officers responsible members of the subcommittees on nutrition in industry.

At present, navy yards and shipyards under control of the Maritime Commission are contacted only on requests by individual yards. Such requests are handled through the regional nutritionists.

Many industrial feeding problems arise from or are aggravated by difficulties in transportation, inadequate housing, poor sanitation and inadequate community marketing

and eating facilities, problems which are the direct concern of governmental bodies other than the nutrition in industry division. The regional nutrition in industry representatives are responsible for bringing such conditions to the attention of the regional administrator, Food Distribution Administration, when they adversely affect the nutritional status of the worker. The nutrition representatives are consulted by the representatives of other divisions of the Office of Defense Health and Welfare Services when any of the latter are contemplating procedures which may have nutritional implications.

No program of industrial nutrition can be complete without an effort to improve the eating habits of the worker in his home and his community. This can best be achieved by a system of adult education which recognizes the intimate and personal nature of food habits and is fully aware of the subtleties needed to inject a lesson of science into well established and cherished habits. Obviously, the homemaker has to be approached and also the local caterers and storekeepers, with added problems as homemakers are drawn into industry.

It was realized early in the program that the prestige and cooperation of existing labor organizations must be solicited to make the nutrition message more acceptable. A National Labor Advisory Committee was set up representing unions within the Congress of Industrial Organizations, the American Federation of Labor, their respective auxiliaries and the Railroad Brotherhoods. Our office is in constant touch with each representative regarding any matter within affiliated organizations.

Both the national Congress of Industrial Organizations and the American Federation of Labor organizations have dispatched messages to all their state and city organizations urging them to cooperate with the nutrition committees. Each labor group is urged to set up its own committee on nutrition, the chairman of which may function as a delegate to the local nutrition committee.

Possible functions of local labor nutrition committees are (1) to set up small nutrition committees in each plant to cooperate with the plant cafeteria management and with other inplant activities, (2) to consider the feeding problems in the absence of cafeterias, (3) to exert an influence on proprietors of vending machines and neighborhood stores or stands, (4) to help the packed lunch campaign, (5) to pool information and popularize successful solutions, (6) to set up nutrition campaigns, demonstrations and courses at union meetings and obtain material, movies, advisers and leaders from local nutrition committees or other qualified sources and (7) to harmonize these activities with sound attitudes toward the rationing situation, availability, shortages, alternatives and whatever else the food situation may require.

To assist this program news and feature articles are provided regularly to the labor press. The American Federation of Labor has a feature service supplying about 450 union papers. In addition, a special section on labor and food for war workers has been set up in the WPB labor press service reaching 800 labor press editors weekly

Now—Whole-Grain Nourishment of Wheat, plus Bran Benefits!

Cereals—whole-grain, enriched, or restored—rate high in our government's new nutrition program. They're included in Group 6 of this "Basic 7" Nutrition plan.

Post's 40% Bran Flakes—the *only* nationally advertised, nationally accepted bran flakes—supply whole-grain nourishment of wheat . . . meet or exceed whole-grain levels of thiamin, niacin, and iron . . . and also supply important calcium and phosphorus.

In addition, Post's Bran Flakes are a mild cereal regulative. They provide enough extra bran to help prevent constipation due to lack of bulk in the diet.

A Product of General Foods

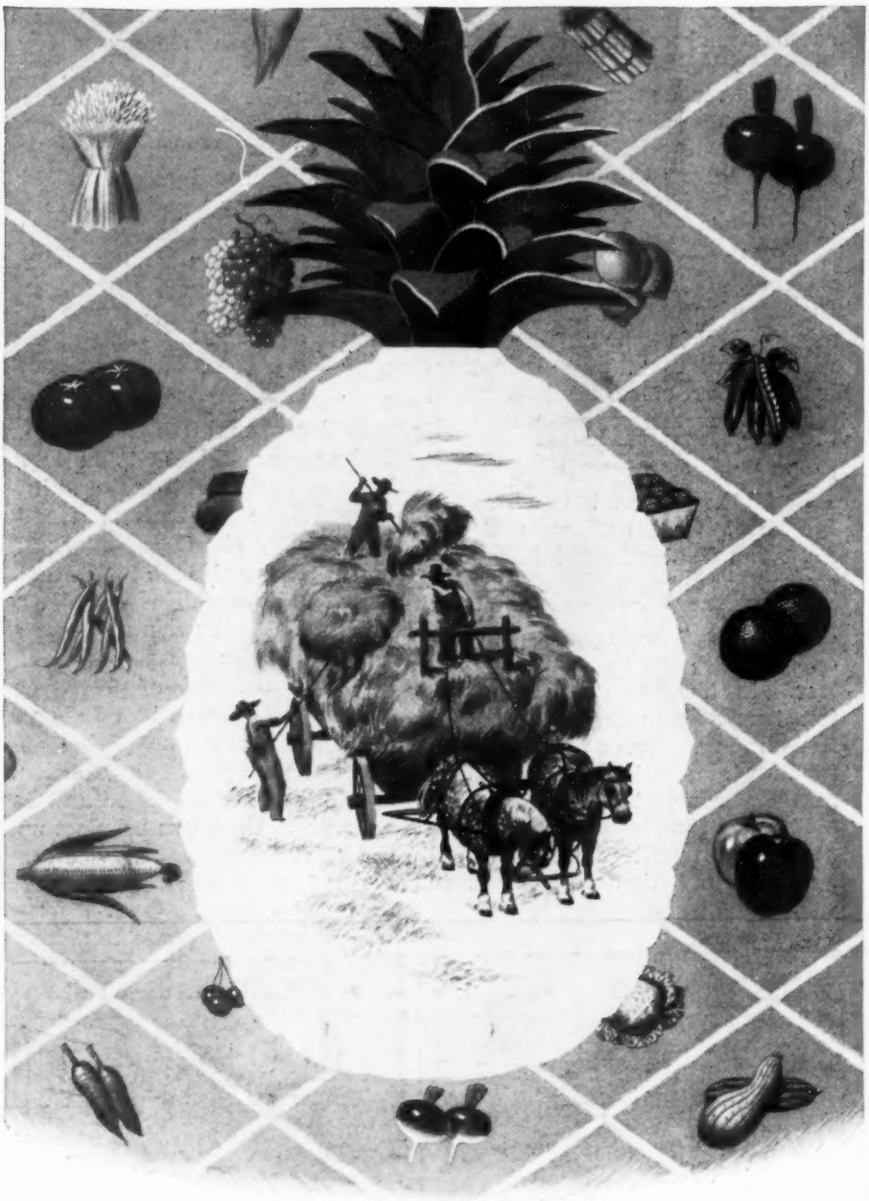
with 3,000 words on nutrition in industry.

Close relations have also been developed with the Association of Industrial Editors of employee publications. The news service supplies 1,200 industrial magazine editors and many other industrial plants a variety of items each month for use in employee publications and on bulletin boards. Weekly releases are also sent to editors of women's pages of newspapers. All releases are sent in response to written requests and are distributed by the Office of War Information.

Biweekly releases to the victory letter, to *Victory* and such government publications as *Consumer's Guide,* Department of Agriculture, and *Domestic Commerce,* Department of Commerce, are provided.

We gladly offer our services to industries such as Servel, Westinghouse, General Electric and others for the review of material to be included in the educational programs which they offer industrial plants. These programs are aimed at the industrial worker, his wife and landlady, and have valuable potentialities.

I have described in considerable detail the organization of the national nutrition program for industry on the federal level. However, this represents only part of the driving force of the program and a comparatively small fraction of the working organization. The great burden of the work is and must be borne by the state and local nutrition committees with their subcommittees on nutrition in industry. Theirs is the task of defining local problems and of formulating programs to meet local situations. They must be prepared to provide qualified instructors for nutrition classes and to give advice on plant feeding to industrial plants on request. It is to them that industrial and commercial caterers must turn for nutrition advice. It is for them to decide which of the nutrition programs prepared by industrial concerns they can cooperate with in their communities. It is their responsibility to advise on posters, fliers, pamphlets and other educational material to be used in nutrition work in their communities. Last, but not least, it is their function to obtain the cooperation of all sections of the community in the nutrition program.



Harvest waits for no man . . . America needs your help to turn ripe crops into fighting foods. Waste can't be tolerated. When your local call comes, sign up with your County Agricultural Agent or U. S. Employment Service office for service in the U. S. Crop Corps. Full or part-time work in the field or cannery will give you extra money for U. S. War Bonds.

Here in Hawaii, with the help of Island people, we are now harvesting and canning a great crop of Dole-grown Pineapples. About ¾ of that pineapple and about ⅓ of the juice will go to our Armed Forces.

HAWAIIAN PINEAPPLE PRODUCTS

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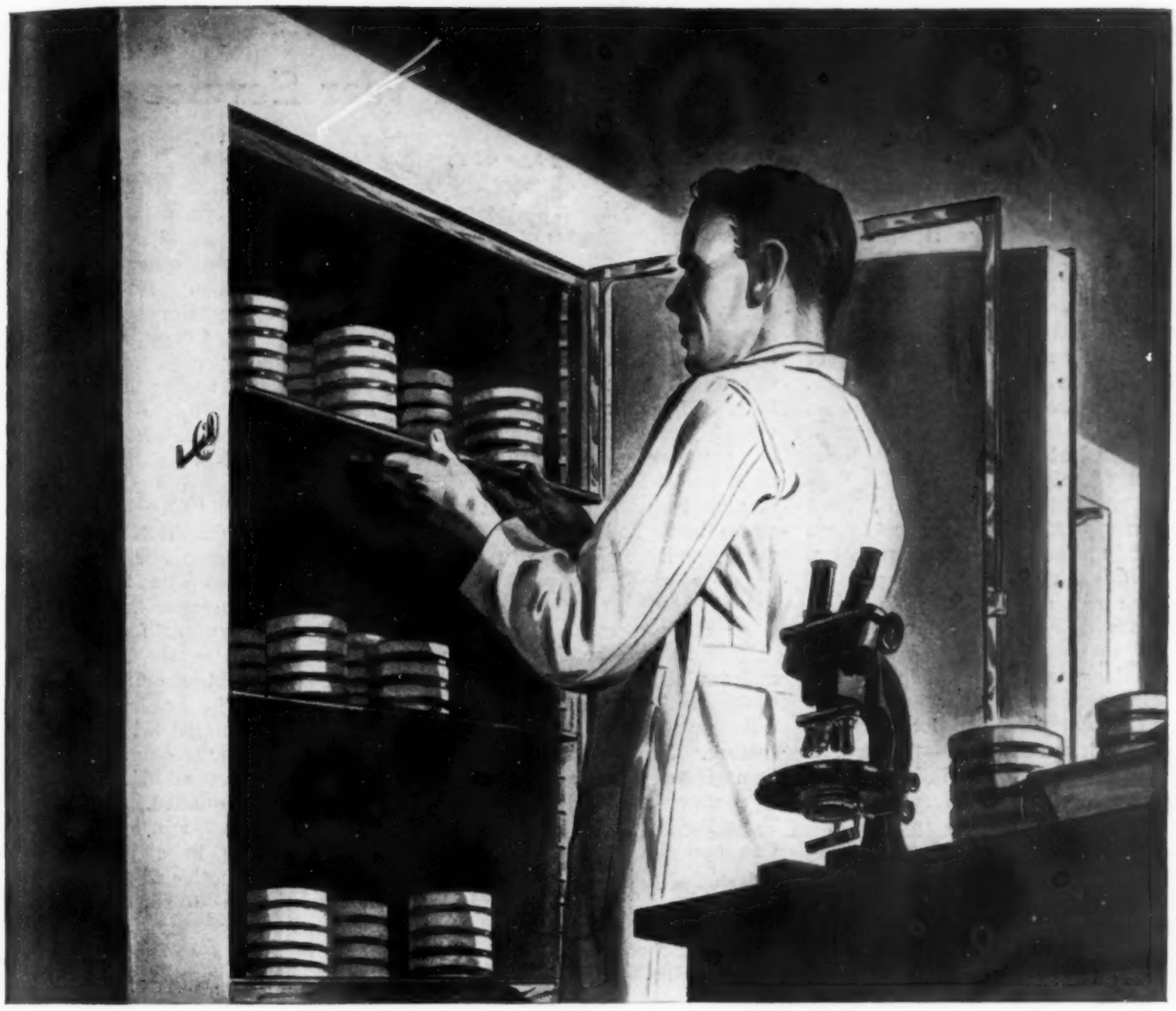

What's this? Baking Biscuits in a Laboratory!

No, this chemist is *not* baking biscuits. Those are sterilized plates containing samples of milk. He is putting them into an oven to be heated to an exact temperature and held there for an exact number of hours. They will then be taken out and carefully examined under a lens.

This is a *purity* test which all Sealtest Milk in every Sealtest Dairy must pass. And, it is only one of a score of tests by which Sealtest protects quality and purity.

The Hidden Element

These laboratory tests and many other services and inspections go to make up that *extra* something which we call the HIDDEN ELEMENT in Sealtest Dairy Products . . . an element which gives *extra* assurance of quality and purity.

Sealtest Milk is sold in thousands of communities under the red-and-white Sealtest Symbol.

Sealtest MILK

Sealtest, Inc. and its member companies are divisions of National Dairy Products Corporation

TUNE IN THE SEALTEST PROGRAM, THURSDAY EVENINGS, NBC NETWORK

Doctors' Wives Organize for War Service

(**Continued from page 487**)

help, the service as it was later offered was gradually rounded out.

Cannily, the women decided on a formal organization, with directing officers and committees for each separate service, certificates of membership, insignia and uniforms. Mrs. Brawner suggested the name, "Doctors' Aide Corps." A course of fourteen lectures in health subjects, arranged with the help of the doctors, was outlined, and one hundred and forty-three Auxiliary members signed up for the first lecture series. Dutifully, they attended sessions at which city, county and state health officers described the functions of their various departments and told how the women might help to make their work more effective. Other government officials lectured on "civic housekeeping"—the water department and its relation to city health, sanitation and sewage disposal, disease-bearing insects and rodents and methods for controlling them, milk supply and its importance in health and disease. Several lectures on physical fitness were included in the series. The Southeast Director of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians spoke on physical disabilities affecting eligibility for service with the Army and Navy; the superintendent of schools discussed requirements and standards for school lunches; the Red Cross nutrition director outlined a program for improving the nutritional status of the community; another school authority lectured on exercise for adults and children. Finally, the selected heads of the Corps' five service divisions outlined their plans and instructed the volunteers in their various departmental duties.

Following induction into the Corps of the first group of graduates at an impressive ceremony attended by the President of the American Medical Association, the Mayor of Atlanta and a long list of state and city dignitaries, more members volunteered their services, and soon another course of lectures was under way. Graduates of the course are given certificates of membership and are privileged to wear the Corps insignia—a caduceus superimposed on the seal of the State of Georgia—and, if they wish to, the snappy Corps uniform of Navy blue. Then they are assigned to one of the services. As far as possible, members are placed in the service for which their individual talents, training and interest best equip them. Today, the Corps offers these services:

(1) *Information and Speakers' Bureau.*

This service sends speakers to address all kinds of lay organizations on health subjects. Health talks on the radio are a regular feature. Some speakers specialize in urging club and employee groups to come to one of the Corps' Blood Type Registry offices. The Bureau also operates a lending library of books, pamphlets, posters and periodicals on health topics and staffs permanent health exhibits and information centers at the Academy of Medicine. Corps publicity invites citizens to visit the Academy on educational tours or to seek the answers to specific problems.

(2) *Health Film Service.*

This group obtains and arranges to exhibit moving pictures on health and related subjects. Films sponsored by the Office of War Information and the Office of Civilian Defense, special features for school and industrial groups, public health and social hygiene pictures and many others are offered regularly. The department maintains an up to date library of appropriate titles and offers use of projectors, screens and sound equipment to interested audiences. During its first four months of operation, the service showed health films to more than 6,000 people.

(3) *Volunteer Agency Service.*

This department acts as a liaison office between the Corps and other volunteer agencies in the community, such as the Red Cross, OCD, AWVS and other health and welfare services. An important liaison activity has been the development of Corps facilities to feed volunteer workers into these other agencies and to urge the public to avail itself of Red Cross instruction in first aid, home nursing, nutrition and Nurses' Aide work.

(4) *Blood Type Registry.*

Under the direction of Mrs. H. Cliff Sauls—appropriately the wife of an internist—the Blood Type Registry has become the largest of the Corps services. As the nature and objectives of the Registry became known, the original typing laboratory at the Academy of Medicine was swamped with Atlantans who were eager to cooperate. Subsequently, three additional laboratories were opened. Thousands have been typed, and appointments are piling up to a point which makes the objective first envisioned by Mrs. Greene—to record the blood type of every man, woman and child in Atlanta—seem not impossible of achievement.

Volunteers for the Blood Type Service are specially trained under Corps supervision. Since many of the doctors' wives were formerly nurses or medical technicians, there is no shortage of essential professional workers. Others are trained in the reception and preparation of those who come to the laboratories to be typed, in making, duplicating and filing records and in the other technics required to maintain the service. Duplicate records are filed in every Atlanta hospital—good insurance, according to Mayor William B. Hartsfield, against loss from a possible air raid or other wartime disaster.

(5) *Doctors' Office Service.*

Last of the services to be established, this may yet become the most important agency for saving doctors' time and preventing grief and inconvenience. A number of war plants are located in and around Atlanta; office girls and

PROTEIN NEEDS MUST BE MET...
But How in Wartime?

During peace times, with all foods plentiful, America derives approximately one-third of its daily protein supply from cereal foods. The other two-thirds are supplied largely by foods of animal origin—meat, fish, fowl, milk, and cheese. The curtailment of the latter for civilian consumption, necessitated by war needs, places new importance on the protein value of cereal derived foods.

Cereal breakfast foods (natural whole-grain or restored for vitamins and minerals to whole-grain values) contain an average of about ten per cent of protein, their actual contents ranging from 7% to 14%, depending on the grain from which derived. Their protein is highly acceptable to the human body, contributing its share to growth as well as maintenance.

When one ounce (prepared cereal or its equivalent in cereals to be cooked) is served with two ounces of milk and a teaspoonful of sugar, this palatable dish presents about 5 Gm. of protein, rendered biologically adequate through the contained milk, 30 Gm. of carbohydrate, and 2½ Gm. of fat, a total of 165 calories.

In addition, it contributes to the diet appreciable amounts of vitamin A, B-complex and calcium, iron, phosphorus, and magnesium.

Cereal breakfast foods are among the most easily digested foods, and are almost totally utilized by the body (98.7%). During war especially they should be served daily, in liberal amounts.

ACCEPTED AMERICAN MEDICAL ASSN

The presence of this seal indicates that all nutritional statements in this advertisement have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.

CEREAL INSTITUTE INC.
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A cooperative effort to present the nutritional value of cereal breakfast foods (natural whole-grain or restored for vitamins and minerals to whole-grain values), undertaken jointly by THE CREAM OF WHEAT CORPORATION... GENERAL FOODS CORPORATION... GENERAL MILLS, INC.... KELLOGG COMPANY... NATIONAL BISCUIT COMPANY... PILLSBURY FLOUR MILLS COMPANY... THE QUAKER OATS COMPANY.

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(Tampax cannot chafe!)

Work or play, summer is a trying season from the standpoint of monthly sanitary protection . . . And Tampax helps a lot at such times because it is *worn internally* and cannot produce chafing, wrinkling or bulging. No pins, belts or pads—*no external odor* can form! Tampax is easy to carry, quick to change.

Tampax was perfected by a doctor and is made of pure surgical cotton, extremely absorbent but compressed to a dainty size. Each Tampax comes in a patented one-time-use applicator, so your hands need not touch the Tampax. The whole thing is so compact there is no disposal problem. Sold in three sizes (Regular, Super, Junior) providing *a variety of absorbencies*—at drug stores and notion counters. Introductory box, 20¢. Economy package gives you a real bargain and lasts 4 months, average. Tampax Incorporated, Palmer, Mass.

Accepted for Advertising by the Journal of the American Medical Association

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Please send me in plain wrapper a trial package of Tampax. I enclose 10¢ (stamps or silver) to cover cost of mailing. Size is checked at right.

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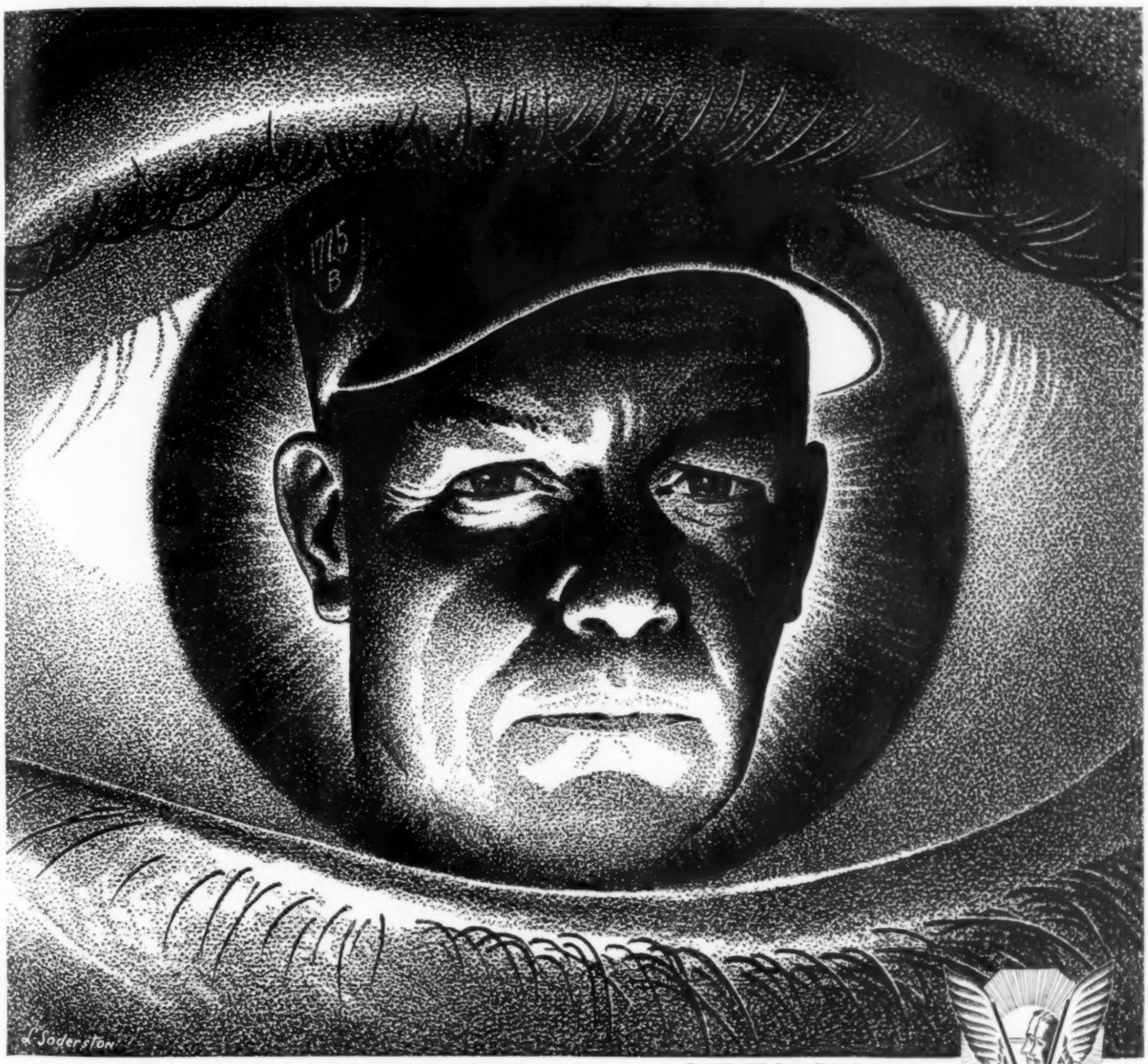
even nurses and technicians are increasingly attracted by wartime wage rates and opportunities to add to their earnings through extra pay for overtime. Volunteer workers in the Doctors' Aide Corps are trained in reception work, switchboard operation, sterilizing and preparing instruments, preparing patients for examination or treatment and taking histories. Many are already on the job, and more are being trained as the need for their services grows.

In addition to these regularly established services, the Corps has cooperated in selling war bonds and Christmas seals, in raising money for the Society for the Control of Cancer and the National Foundation for Infantile Paralysis, and in benefits for local hospitals and charitable agencies. On a recent tour of inspection of the Atlanta area during the intensive drive against venereal disease in Army training regions, Surgeon General Thomas A. Parran of the United States Public Health Service reviewed the work done by the Doctors' Aide Corps and expressed his approval. Continued interest in and growth of this unique service, Dr. Parran told the Georgia ladies, were highly desirable in a concerted effort to help win the war.

Recently, the Woman's Auxiliary of the Southern Medical Association voted funds to print and distribute to state and county auxiliaries throughout the southern area a report of the Doctors' Aide Corps submitted by Mrs. Brawner, its director. At the invitation of interested members, Mrs. Brawner went to Chicago not long ago to discuss the program with the Auxiliary Board of the American Medical Association. The plan is getting national publicity in auxiliary circles, and many groups are already under way with organizational work.

American doctors are busier than they've ever been before, and no doctor expects any letdown until after the war is over. Yet the time may be close at hand when the weary doctor at the end of a hectic day will come home to find a note on the hall table. "Have to speak at a dinner meeting," the note may say. "Evening office hours later. Don't wait up."

This announcement also appears in The Saturday Evening Post, Collier's, American Weekly and American Magazine



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VISION FOR VICTORY

SUPPRESS THAT SABOTEUR IN YOUR EYE!

He is your own worst enemy and a menace to your country in its hour of peril!

Constantly he tries to trick you into causing sabotage—destruction and the slow-down—on your war production job.

That saboteur has sneaked in so subtly that you may not even know he is there. But the longer you put up with him the more persistent, deceitful, and viciously dangerous he grows. Who is he? *He is your faulty eyesight!*

Weak, straining, blurring, flickering eyes keep you groping in a world of semi-twilight. They waste time and ruin precious material, cause accidents and nervous exhaustion, bog you down before quitting time.

"But," you say, "my eyes are OK." Don't be so sure. Seven out of every ten war workers have defects of vision, and of these *only three* have done anything about it. There are fully 7,000,000 people with uncorrected faulty vision, working at the machines, desks, drafting boards, typewriters and filing cabinets in our war plants. Likely, you are one of them. In the name of good sense and patriotism, don't guess about your eyes! Find out their true condition.

Profit by the best professional eye services and technical skills. Back up the boys who are out there defending your priceless freedoms, by bringing your eyes up to flawless fighting efficiency. See-Power will win, on the production line as on the firing line.

KEEP THE FLAME OF FREEDOM BURNING

It is your privilege in this land of opportunity to put your dollars into the fight—and save them too! *BUY WAR BONDS TO THE LIMIT.*

BETTER VISION INSTITUTE, INC.
630 FIFTH AVENUE, NEW YORK CITY

Marcelle Leg Make-Up, the lotion which simulates silk stockings so cleverly, has now become a summer favorite.

Marcelle Leg Make-Up smooths on easily and dries quickly. It stays on until you remove it with soap and water. It is available in two popular Marcelle shades: Summer Tan and Panama Tan.

Marcelle Leg Make-Up belongs to the Marcelle line of cosmetics, safe for sensitive skins, and accepted for advertising in publications of the American Medical Association.

Marcelle HYPO-ALLERGENIC COSMETICS

Ask your Marcelle dealer to supply Marcelle Leg Make-Up. The price is 55¢ for a four ounce bottle. Start wearing Marcelle Leg Make-Up now.

MARCELLE COSMETICS
1741 N. Western Avenue, Chicago, Illinois

School Goes to the Handicapped Child

(Continued from page 508)

up to $50 in any single purchase. The equipment is cared for and maintained by the district.

Distance between classroom and home varies widely. Some homes served are in the block next to the school grounds; others are farther. The longest distance for such service to date is slightly more than five miles. The power to operate the device is furnished at the pupil's home, where the master station is located.

Standard equipment consists of a master station and a substation, both equipped with the necessary transformers for satisfactory use over a pair of continuous wires of the required length. If more than one classroom is wired, the school wires are brought to a conveniently located junction box where they can be distributed and redistributed as the need may arise.

It has been found that for best results the telephone terminal should be located at the front of the classroom. The home terminal, of course, is placed near an electric outlet in whatever room is most convenient for the pupil—probably a bedroom. Since the student may "attend" different classes by means of the electrical unit, Iowa school officials experimented and found that the classroom apparatus may be placed on a portable shelf and carried from room to room as occasion requires.

An appropriation of $15,000 was allotted for the education of Iowa's handicapped children. A pupil who is to be provided with intercommunication equipment is selected from the home instruction group on the basis of being so situated as to derive greatest benefit from its use. Age, experience, extent and type of disability, and the availability of electric service and wiring are all given consideration. The physical condition of the pupil must be certified by a competent physician, such certificate being a part of the application form. Use of the electrical teaching device is not recommended for a child not thoroughly familiar with classroom procedure, as he is unable to visualize school methods and, therefore, is not likely to obtain maximum benefit.

The aid which physically handicapped children derive from this two-way electrical teaching device reaches far beyond classroom learning. The contact with his own social group which the child gains and the valuable give and take of classroom discussion maintain his morale and eliminate any feeling of inferiority. Knowing that he is keeping up with his friends scholastically and studying diligently on lesson assignments, he has neither the time nor the inclination to brood over his physical handicap. In numerous cases, recovery is thus actually speeded up.

Are Your Eyes Red?

(Continued from page 491)

The most dangerous of all red eyes is caused by increased pressure within the globe. This condition is known as glaucoma, and if neglected it may lead to blindness. Fortunately, in some cases, warning signs are given by transient periods of foggy eyesight, rainbow halos about electric lights, or dullness or slight pain in the eye and head. However, an attack of glaucoma may come on suddenly with severe eye pain, violent headache, nausea, vomiting and rapid loss of sight. If the attack is mild it can be controlled and vision can be restored by powerful drugs that contract the pupil. If medicines fail an operation to relieve the pressure is necessary in order to save the sight.

Your attention has been called to the various shades of red encountered in a few inflammations and infections. As a rule the appearance of bright brick redness within a few days means conjunctivitis. When the color is faint red or pink, a more dangerous sickness is indicated. Remember that many important disorders may give rise to little

distress or redness. A surprised mother leaving the office with a prescription for a thick pair of nearsighted glasses for her daughter will often say, "Her eyes never bothered her in school or at the movies. Alice never had a headache. Of course, she has been holding books rather close during the past year." Farsightedness and astigmatism left uncorrected will induce headaches and arouse one to seek relief. Nearsightedness progresses without discomfort. The child merely moves nearer the blackboard or the movie screen and forgets all about the nearsightedness until it is discovered by the school nurse.

Many disturbances within the eye are detrimental to sight and even to life, yet the white of the eye does not change color to warn of danger. These conditions include affections of the optic nerve (the nerve of seeing) and changes in the arteries and veins due to high blood pressure, diabetes, hardening of the arteries, anemia, leukemia, kidney trouble and nerve diseases, all of which can be detected by the physician.

Too often people come for assistance only after actual damage has been done. Hundreds of patients, some with one eye already blinded, have remarked bitterly, "If I had only known who to go to I would have taken care of my eyes sooner." When in doubt, consult your family doctor or communicate with the superintendent of your nearest hospital. Although the public applies the title of doctor loosely to druggists, optometrists, opticians, chiropodists and chiropractors, the fact remains that eye physicians do not practice medicine in stores or participate in community optical plans. You have the right to know whether or not the eye doctors giving you advice are graduates of medical colleges trained in the care of all diseases but specializing in the treatment of your disease or disorder of vision.

The chief purpose of this article is to warn against eye meddling. Remember that the margin of safety in eye trouble is slim. Your country needs healthy eyes with perfect vision more now than ever. Do not forget that competent and correct diagnosis today can eliminate days of treatment next week.

A FRIEND OF THE FAMILY

BAKING SODA is a product of many uses, and so, indeed, a friend of the family.

In the kitchen and in her many household cleaning chores, Baking Soda has long been one of mother's old standbys.

Being pure Bicarbonate of Soda, our Baking Soda brands, Arm & Hammer and Cow Brand, serve also in the bathroom. Both are classified as Official Remedies by the Council on Pharmacy and Chemistry of the American Medical Association. When Bicarbonate of Soda is prescribed for hyperacid types of indigestion, our Baking Soda can be confidently used. A paste will ease the pain of minor scalds and burns, the sting of insect bites.

Both are good tooth cleansers, acceptable to the Council on Dental Therapeutics of the American Dental Association.

These dependable products have been known to millions of American families for generations. They are honestly made and honestly sold. Their cost is low—just a few cents a package—at the grocers.

Business Established in 1846

CHURCH & DWIGHT CO., Inc.
10 Cedar Street New York 5, N.Y.

A Piece of Paper?

TO the patient, the Eye Physician's prescription may seem merely a strange bit of paper . . . until it is translated into sight-correcting spectacles.

In reality, of course, the picture is reversed. It is the bent metal and blank lenses which are just so much material . . . until they are fashioned and fitted according to the Eye Physician's prescription.

The interpreting of your prescription is a precision-task . . . deserving to be entrusted to opticians whose reputation with leading Eye Physicians and Family Physicians is unquestioned.

The Family Physician . . . the Eye Physician . . . and the Guild Optician . . . three important men in the care of the eyes.

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THE GUILD OPTICIAN ACTS AS AGENT FOR THE ETHICAL EYE PHYSICIAN IN RENDERING HIS EYE CARE SERVICES TO THE PUBLIC.

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Ask any Guild Optician for the names of Eye Physicians in your Vicinity

QUESTIONS AND *Answers*

Uses of Blood Plasma

To the Editor:—In giving blood to be made into plasma for our service men, is natural or acquired immunity to diseases retained and passed on to the person who eventually gets the plasma transfusion? By this, I mean a donor who has been vaccinated or inoculated for typhoid, etc., or one who is taking cold vaccine.

Also, cannot the red cells from blood which is made into plasma be put to some use?

P. B., Maryland.

Answer.—The answer to the first question is yes: The immune substances, or antibodies, are preserved in the dried plasma used for those in military service. The answer to the second question is no: Red cells cannot at present be used after they are separated from the plasma. It is possible to resuspend these cells in a physiologic fluid, but red cells recovered in this manner do not last long in the blood stream and do not function well as oxygen carriers.

Blood is a complex fluid. It consists of formed elements (cells) and fluid (plasma). When the fluid is separated from unclotted blood it is called plasma. When it is separated from clotted blood it is called serum. Blood given for the military services is used as plasma. The plasma from several donors is pooled. The pooled plasma is submitted to an evaporating process to remove the water. When this process is completed, the plasma is in a dry, powdery form. It is made ready for use by redissolving it in sterile water.

No soldier receives the undiluted plasma from a single donor. It is necessary to dilute the plasma of each donor by mixing it with plasma from other donors in order to reduce the possibility of incompatibility between the donor's plasma and the recipient's blood. Because of this dilution factor, it is not likely that specific protective substances, if they should be present in the plasma of an individual donor, would reach the recipient in sufficient concentration to be serviceable.

Serum or plasma from persons who have recovered from an attack of one of the communicable diseases is sometimes used to protect others from the same disease. This is spoken of as convalescent serum, or it may be plasma. The best convalescent serum is obtained within a few weeks following recovery from the disease. Since communicable diseases for which convalescent serum is useful are largely childhood diseases, the serum is seldom used for adults. Sometimes a donor is immunized by vaccination and his blood or serum is used to treat persons ill with the disease against which the donor was vaccinated. This is referred to as hyperimmune serum or immunotransfusion. Natural immunity to disease to which mankind in general is susceptible rarely if ever occurs.

The drying of plasma does not destroy the immune substances acquired by donors in various ways, but plasma is not collected for the military personnel for that reason. It has far greater usefulness among soldiers and fighting men for the restoration of fluid loss by hemorrhage and in the treatment of shock.

Freedom for Children

To the Editor:—There has been a great deal written concerning the raising of children and allowing them to venture into new experiences under guidance. We have found it exceedingly difficult to allow our children their former freedom in play now that so many household appliances are so strictly rationed. Just how can these new prohibitions be explained to younger children?

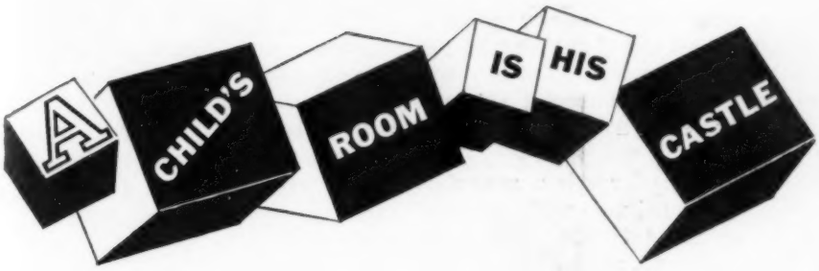
What effect will food rationing have on the present growing children?

H. L., Illinois.

Answer.—It is the natural desire of parents to shield the child as much as possible from the impacts of war. Encouraging the child to express his psychologic impulses—curiosity and adventure—does not give him a license to destructiveness. War or no war, the youngster must be taught respect for property. Only through sensible restraint will he be able to develop and cultivate self discipline. Contrary to popular belief, children do not object to judicious restriction, nor do they object to reasonable punishment for deliberate offenses. After all, this is what constitutes parental guidance. As to the methods utilized, they must vary with the disposition of the individual family. A principle which should be kept in mind is that there must be unanimity of opinion between the parents on what is right and what is wrong, and the child should know that offenses cannot be escaped with impunity.

As to the effect of food rationing on the present generation of children, there is as yet no indication of threat to their nutritional status if available foods are wisely used. Aside from occasional inevitable confusion to the purchaser and merchant, the point system tends to eliminate minor and unnecessary food luxuries which few youngsters will miss in their dietary.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.



A CHILD'S ROOM IS HIS CASTLE

By DORIS CARLSON

IN THESE DAYS of changing ideals and ideas, it's difficult for small children to keep their sense of security. Many of the relatives and friends most important to their narrowed existence have suddenly gone away—fathers and uncles on whom they had depended for much love and security. Your child, too, may be experiencing this new feeling of not knowing exactly what is going on. He may be at a loss to know what is his own from one day to the next, because suddenly his world seems to be topsy-turvy.

During World War I, small children weren't nearly as conscious of the world crisis as youngsters of today are. The radio blaring forth war news every minute of the day has let them in on the frightening side of war, and the smallest toddler knows he must be quiet to let his parents hear what the radio is saying. At the same time he absorbs enough of the news or program to know that there's a war.

Miss Frances Roberts, instructor in child development and care in the department of home economics, University of Wisconsin, suggests that a room for the child to play in, a room of his very own, where he may keep his belongings and spend much of his time, may help to give him the necessary feeling of belonging, of having something to hold to. Life may be changing in the rest of his household, among his small circle of friends and even in the world about which he does know quite a little—but in his own playroom, the child may keep everything the same from day to day. This alone will help insure his sense of security.

Helping a child to keep his faith in himself and his loved ones in these early childhood days may mean much to his personality development later in life, says Miss Roberts. If he grows up with a feeling of having nothing of his own to depend on, nothing to help take the place of the peaceful companionship he may be missing because of busy war conditions, a child may have a hard time adjusting to difficult situations later on.

Converting a room into a preschool nursery at home is really simple. The important thing is that it is a place the child may call his own, where he may do as he pleases (with guidance). Tangible evidence in the form of elaborate, expensive equipment is not necessary; things easily provided are the most desired. Even with the wartime shortage of good lumber and other materials, it's still easy to plan an interesting and adequate play space.

Planning furniture and room fixtures in scale with a child's size will prove worth while when his joy and delight are noted. His sense of responsibility will increase as he is shown how he himself may use and take care of these things that are just his own size.

A few minor changes will make the child's room itself into a little person's haven. Putting in hooks low enough so that he may hang up or take down his clothing, or hanging an inexpensive mirror low enough for him to see how to comb his hair, will build his pride in his accomplishments. Because most preschool children become interested in doing things for themselves at one certain time in their development, it's well thus to help each child on his way to self reliance. Ridiculing a child's attempts to help himself, or impatience with his unsuccessful efforts, may destroy this wish to do things. Actually, such independence should be encouraged at the right time.

As for the walls in the playroom, Miss Roberts suggests that the lower

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part, which soiled, sticky fingers rub against all day long, should be washable. The colors liked best by children are gay, cheerful shades. Woodwork should be light and washable also.

Low shelves for play material may easily be built with orange crates, fastening two or three together end to end, so that the strong pieces are on the top, middle and bottom, forming two shelves. Covered with inexpensive paint, this new cupboard provides a storage space which the child can easily reach.

Furniture in scale with your child's size will please him too; the pieces should be stable and accident proof if possible. Chairs sturdy enough to stand on should also be light enough to be carried by the child. In choosing chairs, it's well to remember that a child, when seated, should have his feet flat on the floor and the lower part of his back against the back of the chair.

Round tables prevent the possibility of hurts from sharp corners and are therefore desirable. In any case, the table should be from 18 to 22 inches high. An old table with its legs cut down to this height, repainted or covered with oilcloth or linoleum, will serve the purpose inexpensively and adequately. Avoid folding tables in a playroom. It's too easy for curious fingers to get squeezed. Besides, a folding table may collapse at the least provocation, such as a kick from a small, stray leg!

Children like pictures of people doing things, animals and flowers, and it's easy to find these in current magazines. Pictures can simply be pasted on the washable walls at the child's eye level and changed often to add to his ever increasing knowledge of the interesting world around him.

The toys too should be carefully considered. Play isn't just for fun in a child's life. It's his work; it's a way of development. Active play is a sign of good mental health, and as such it should be carefully supervised. Play may be used as a means to an end, but it can also be used only as a time consumer. If a child is furnished with playthings which have to do with his natural impulses, the greatest educational value may be had by the simplest and most natural method.

Your child needs to explore and experiment, to create and to understand. For this he needs raw materials with which he may work to satisfy his own desires. A child has a natural curiosity about new forms, colors, sounds and surfaces, since he learns first by his fingers. Objects with a variety of textures and sizes will help the young to learn faster, since they like to do and find things out for themselves.

In choosing material with which the child is to make things, Miss Roberts cautions the wise parent to remember that it's not the material itself that counts with the child, it's the potentialities! For instance, blocks which make the most realistic buildings will be the most popular, not those with the fanciest pictures. Homemade blocks can be the most successful ones. Children like large blocks, which must be hollow in order to be easily handled, because it's easier and faster to build with them, and these are just the blocks which are the easiest to make at home!

To make a set of large hollow blocks, save wooden cheese boxes. When you have four boxes, take one apart, and nail a side over the open side of each of the other three boxes, thus making three large blocks. These are heavy and stable, usually more so than cigar boxes. If strong cigar boxes can be found, variety in size and shape can be obtained by making the same kind of blocks from them. Painting these blocks of course adds the final touch, but it's well to remember that children know that too many different vivid colors won't combine to make a realistic building.

Raw materials such as clay, paper and crayons furnish the chi'd with quiet, constructive amusement. He can make colored paper streamers to trim his room, or just cut up newspaper (if he is very young) with round-edged scissors—thus learning to cut without learning on the best table linen or bedspreads.

A roll of white kitchen paper will furnish a large, inexpensive quantity of paper on which he may draw or paint. As crayons break easily, wooden pencils with colored lead are best for the young child. The wise parent knows also that paint in small jars is easier to handle than that in a paint box.

A large box in which to keep discarded household belongings may

prove a helpful inclusion in this room. Children seem to have an inherent fondness for the "real" thing, and your child probably is no exception. Buttons, boxes, clocks and broken kitchen utensils seem to add realism to make-believe games.

While it may seem difficult to furnish indoor play material to help your child's physical growth, Miss Roberts advises that this is a real necessity and well worth consideration. He needs ways of exercising his leg, arm and shoulder muscles so that they may become well developed and strong. Some parents have solved the problem by fastening a swing or low trapeze in a doorway, securing it in the wood molding. If there is a low wood molding round the room, another idea is to fasten an iron bar across a corner in this molding, thus giving the child a means of turning and climbing. These ideas should be used only after considering whether or not they will spoil the room for future use.

Miss Roberts stresses that in choosing play materials for preschool children, one should remember that during the years 2 to 6, personality and character development is more dependent on play activities than at any other age. By guiding the child in the use of constructive toys, the parent may help to develop his imagination and initiative. Play leads to an increase in skill and in understanding. When a child plays constructively and intelligently, he is learning infinitely more than may be apparent; he is developing an attitude which helps him provide his own security.

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My mother dotes on scientific care,
So when she hears me cry,
She tiptoes to the room and studies me
With cold, judicious eye,
Looks undecided, musters firm resolve
And nobly lets me lie.

Poor Dear! She wants to take me up, I know,
In spite of what books say
And noted specialists who caution her,
"Don't spoil your child that way!"
I'm working hard to educate her now;
I'll have her spoiled some day!

—Gail Brook Burket.

Let's Not Ration Loveliness

Let's not ration loveliness; it is essential to our way of life; it helps to offset the ugliness of war. We may have to conserve the means by which we achieve and maintain loveliness (nowadays we should buy everything *conservatively*, except War Bonds), but even so we shall contrive to look lovelier and fresher than we used to in the days when beauty aids were as abundant as blossoms in May. . . . If we use our beauty aids with more intelligence and less waste, with greater artistry and restraint, they will go further and achieve for us a lovelier cosmetic effect. . . . With more and more women doing the work of men in defense jobs and in the armed forces, not to mention the thousands of women in various branches of OCD, it is desirable that we cling to those nice habits of personal care, to those charming little vanities, if you like to call them that, which are such an integral part of the loveliness of American womanhood. . . . But let's not be extravagant with our beauty aids; let's select them wisely to suit our requirements, and use them effectively and *conservatively*.

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Babies Born with Heart Trouble

(Continued from page 495)

"Doctor, you said that some of these patients could be cured by an operation," said the mother. "Is there a chance that my child would be one of these?"

"There is a good chance," answered the doctor. "More than a tenth of all congenital heart disease is of this type. Even if your baby does have this condition, he is too small for an operation yet. Most surgeons prefer to wait until the child is at least 4 or 5 years old. The operation can be performed at any age after that."

The doctor then told her that this condition is called "patent ductus arteriosus" because there is an abnormal opening or "duct" between the two large arteries that leave the heart. It is one of the subdivisions of the noncyanotic group. Formerly, these patients were more or less cardiac invalids and few survived middle life. Less than five years ago, young Dr. Robert E. Gross of Harvard University Medical School performed the first successful operation for the relief of this condition.

The patient was a little girl of 7 who had been born with heart trouble. She was small for her age and quite thin because the abnormality of her heart interfered with the normal supply of blood and nourishment to her tissues. The characteristic heart murmur was present, and x-ray showed that her heart had already begun to enlarge under the strain. Dr. Gross made an opening through the ribs so that he could actually visualize the heart. The abnormal duct connecting the two arteries was obliterated by tying a heavy, braided silk thread around it. This little patient was allowed out of bed the day after the operation. She was ready to leave the hospital after seven days, with a complete cure of her heart trouble!

Since that time, Dr. Gross and a number of other specially trained surgeons have performed similar operations with startling success. Scores of patients have already been cured. An operation on the heart is a delicate procedure, and there are certain dangers connected with it. The doctor agreed with most cardiologists that the operative risk is justifiable when the hope for success is measured against the perils of the untreated condition.

"And so you see," the doctor concluded, "the outlook for babies born with heart trouble is not universally dark. It all depends on the type of congenital heart disease that is present. A long and reasonably active life is possible for many patients. Complete surgical cure can now be promised to those who suffer some forms of congenital heart disease."

Antivivisection

(Continued from page 505)

laboratory in one of the most respected hospitals of Newark was raided by the so-called "humane officers" at a time when by a fortunate accident I happened to be absent. This research ended abruptly, for I had never imagined that experimenting on animals in a hospital without a special permit was a violation of New Jersey law. In New York, a well known private hospital was favorably disposed toward an arrangement for continuing this work but dared not take the risk of antivivisection antagonism which would hinder the raising of needed funds. I also know of one of New York's large public hospitals whose staff would like to engage in research on shock and related military problems and are legally prevented. Beyond these institutional difficulties are the legal barriers in many states against individual physicians who are capable of valuable research, or who are entrusted with responsibility for human life, but are not allowed to practice a new operation on an animal before performing it on a patient. The most immediately urgent fact, however, is one that can be verified by any responsible inquirer; namely, if the research on the previously mentioned military problems is to be intensified, the principal scientific institutions of the country are threatened with a lack of dogs at the same time that countless thousands of them are being slaughtered uselessly by the enemies of science. The highest compliment to any endeavorer is a testimonial of his success. Therefore antivivisectionists should be pleased to know that they are holding back the conquest of disease and the saving of wounded soldiers.

Obviously, the main support of this evil is gained through its masquerading as a humane movement among a large public who are ignorant of the facts and easily victimized by appeals to their sentiments against cruelty to animals. Likewise a large number of more or less prominent citizens carelessly lend their names, by reason of flattery or some sense of duty in sponsoring an alleged humanitarian cause. There is also a virulent nucleus of dog-kissing women and faddists of pathologic mentality. All these can be counted as the dupes, the suckers, who furnish the money without which the whole racket would collapse. The aggregate sum extracted by the adroit appeals compares not unfavorably with some of the cruder rackets. There is an incentive also for other leaders who neither receive nor need money but who enjoy unearned power and public notice as "officers of the humane society" or "friends of the poor, dumb animals."

As one of the experimental workers who are subjected to the unceasing slanders, I am morally entitled to strike back at these malignant enemies and question their character and motives. Are the inside antivivisection leaders honest? Are they honestly ignorant? Are they honestly fanatical? What demagogic skill has made an utterly false propaganda so highly successful?

In upholding their great primary argument, that animal experimentation is useless, that nothing of value has ever been learned from it, the antivivisectionists have played so strongly on sentiment and have also

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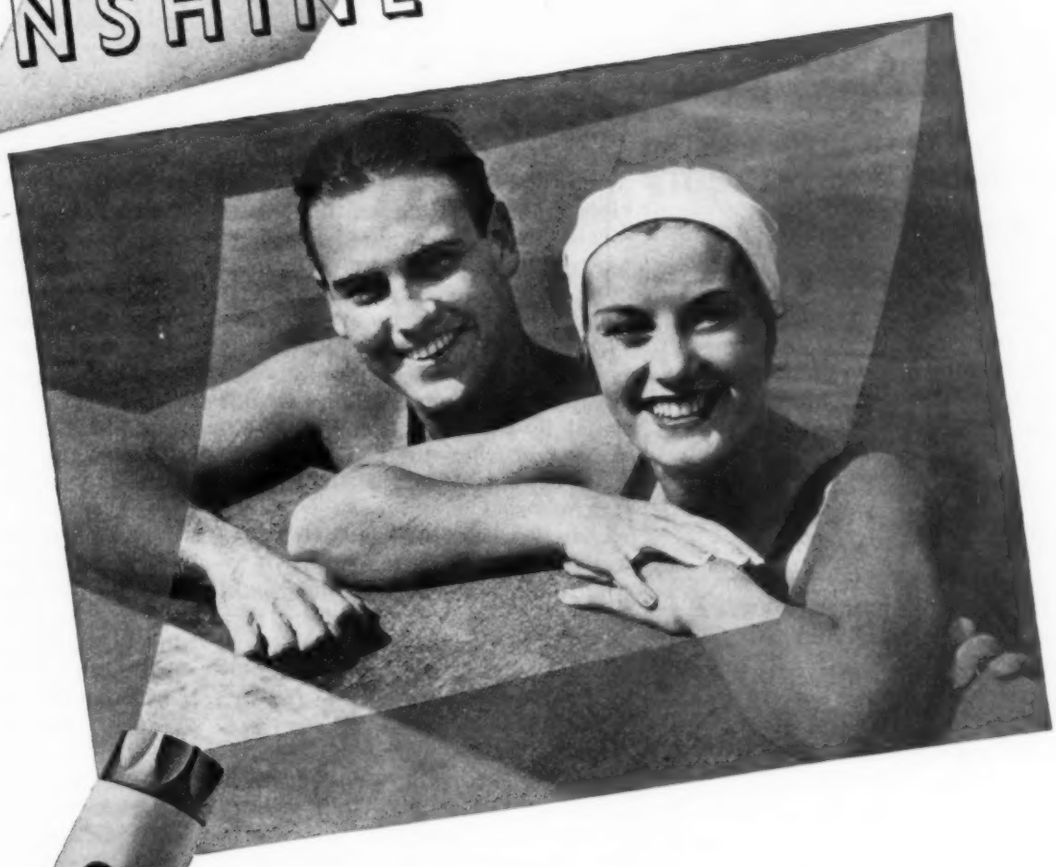

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YOU'VE DONE YOUR BIT.. NOW DO YOUR BEST!

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dragged in so many prominent names that the public is skilfully bewildered, and an impartial critic may perhaps feel that I have been too extreme in declaring that no valid fact and no reputable present day physician or scientist supports antivivisection. Therefore let us cut through the whole mass of lying sophistry and turn on the vilifiers with the demand: Do you believe your own assertions? Where are your hospitals? Where do you go when you yourself need treatment or operation?

England has long been a hotbed of antivivisection, which commands votes enough to awe Parliament. Accordingly, London had one antivivisection hospital, until it was forced to close a few years ago, when it was no longer able to keep up even a dishonest pretense of not using any treatment derived from "vivisection."

American antivivisectionists certainly have the numbers and wealth to set up at least a small hospital to demonstrate their theories, if they actually believe their own statements. The eminent physicians whom they claim to have in their ranks could form the staff. The conditions in such a hospital would be clear. Surgery would be performed without asepsis. There would be no antitoxin for diphtheria, no serum or vaccine for any bacterial infection, no Pasteur treatment for rabies, no insulin for diabetes, no adrenalin or any other gland products, no vitamins, no sulfanilamide drugs, no guinea pigs for diagnosing suspected tuberculosis or other animals for other tests. Without waiting for a long list of other derelictions, the public authorities would step in and arrest the whole organization. In other words, the public which gives the antivivisectionists power to obstruct medical science insists on having medical science in treatment.

Few fanatics are so benighted as to refuse a needed treatment which they know to be derived from animal experiments. The great mass of the cultists, including the leaders, accept and expect such treatment when their own lives or those of relatives are at stake. Furthermore, the chief conspirators know very well that a hospital operated successfully according to their ideas would furnish the one conclusive proof of the uselessness of animal experiments. Because they carefully dodge any such test, I unhesitatingly brand these leaders as dishonest, regardless of their rank or status.

Possibly a feeble excuse may be set up that laws and popular prejudice, inspired by the wicked doctors, interfere with applying these noble humanitarian principles to human patients. There are no such restrictions to malpractice on animals, and in large cities like New York there are actually antivivisection hospitals which pretend to treat sick animals without benefit from animal experimentation. But when Mrs. Crank brings her four-footed darling to the antivivisection hospital, she approves the tiled operating room and the sterilizers which assure him an aseptic operation, according to the bacteriologic principles which were established by animal experiments. Also it is a favorite antivivisection argument that differences between species are so great that no observations on animals can have any value for man. Accepting this false premise, the converse must also be true, and the first trial of any treatment on a dog must be an experiment, even if it has succeeded in human patients. There are always new anesthetics, new antiseptics, new worm medicines and whatnot, which carry certain benefits and certain dangers. Mrs. Crank would be outraged if her precious Bijou did not get the best and latest treatment, but she would sue for damages if Bijou suffered harm from any treatment which was tried first on him. In other words, the antivivisectionists make use of experimental discoveries, usually after some delay, and they actually demand animal experiments by insisting that treatments be tried on friendless animals before they are applied to their own pets.

The antivivisectionists have enough money to hire veterinarians to run some animal hospitals under the required pretenses, with their tongues in their cheeks. Since they thus have the doctors and the patients, why do they not set up veterinary colleges to teach how to treat animals without using any results of experiments on animals? They have not done so, nor could they get faculty or students for such an absurd attempt.

The facts are too plain for denial or doubt. Antivivisectionists in gen-

eral know the falsity of their own claims, because they accept treatments based on animal experiments whenever they themselves are sick. Also, regardless of the real or pretended fanaticism of this cult, the vast majority of the American people disagree with them. The enormous majority of Americans do not believe that their universities maintain fiendish torture chambers for animals, and they decidedly do believe in the life-saving value of the discoveries made by using animals. The only open question at present pertains to the technic of the racket and the practical means necessary to smash it.

In early times, large cities like New York were full of horses, cattle and other animals which were often grossly abused by ignorant and callous owners. A real good was therefore accomplished when a "humane society" was organized and received extensive powers from the legislature. Now the numbers and the abuse of animals have diminished on account of the automobile and changed living conditions. The proper functions of a "humane society" have shrunk correspondingly, but the antivivisection leaders have adroitly grasped an opportunity; by controlling the "humane society" they enable their small minority to use its powers for a war against science in defiance of the wishes and beliefs of the great, sleepy public. Thus the huge public who believe in modern medicine still pay their dog license fees to an antivivisection organization, and this tribute plus gifts and bequests supports the racket which is the chief menace to medical science.

It is correct to designate such an abuse of power and funds by a small ring as a racket. There are three simple, obvious remedies. With all due appreciation of the good work that is still done by the American Society for the Preventioin of Cruelty to Animals, when it obstructs scientific research this society is doing more harm than good. When it denies the use of surplus animals to scientific investigators, to the public institutions of city and state, and even to uniformed medical officers of the U. S. Army and Navy engaged in studying problems of war wounds, it is abusing its power and pandering to the antivivisectionists.

Antivivisection can quickly be killed by striking at its Achilles heel, namely its financing. Not only should the rich revenue from dog licenses be stopped, but every gift, bequest or support of any kind to any so-called "humane" organization should be cancelled unless it can prove itself to be unpolluted with antivivisectionism. Every decent citizen should withdraw his name from the list of honorary officers or sponsors, if he has carelessly given such an endorsement to any "humane" organization that is contaminated in this manner. Antivivisectionism stands so clearly convicted of both ignorance and dishonesty that any connection with it should be considered a disgrace.

This entire article, though not stooping to the vile language of the antivivisectionists, discards the usual mild scientific defense and substitutes a long overdue attack and exposure of falsehood and hypocrisy. A pretense of moral indignation and a tone of superior virtue have been the most profitable stock in trade of the enemy. It is time to show who is entitled to moral indignation and who should rightly be denounced. The antivivisectionists have hindered and are now hindering medical research, in peace and war. A distinction between the fanatical or deluded opponents of this life-saving work, and their leaders who prey on and inflame the popular ignorance, is equivalent to the customary legal distinction between manslaughter and murder. Moral forces can put an end to this scandal when the general public comes to understand that antivivisection is a crime.

RURAL ELECTRIFICATION

(Continued from page 499)

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HYGEIA
NURSING BOTTLES
AND NIPPLES

Books ON HEALTH

Mind, Medicine and Man

By Gregory Zilboorg, M.D. Cloth. Price, $3.50. Pp. 344. New York: Harcourt, Brace & Co., 1943.

This is a book about psychiatry for the more advanced lay reader. It deals with certain general aspects of the subject in nine chapters. In the first, it discusses certain misconceptions; for example, confusion between mental illness and so-called insanity, between suppression and repression. In the second chapter the use of the word "instincts" by psychiatrists is explained and illustrated; in the third chapter the psychoanalytic contributions to the structure of personality are outlined. The fourth chapter deals with certain aspects of mental illness, and the fifth with some of the practical matters connected with psychoanalytic treatment, the so-called schools of analysis and the dissenters from analysis. The relation of psychiatry to the other social sciences and civilization generally is discussed in the sixth chapter, which is particularly deserving of reading by those who have the idea that psychiatrists are unaware of the importance of cultural factors. In the eighth chapter the psychiatric point of view in criminal behavior, criminal procedure and criminal adjudication is dealt with. A final chapter, which is in the reviewer's opinion the best of all, is entitled "Psyche, Soul, and Religion." In substance, it says that psychoanalysis and religion, instead of being antithetical, as many assume, are merely two aspects of the same thing and tend to support one another if properly interpreted. Both endeavor to make man happier and in every sense of the word better. They use different technics, make some different assumptions, are represented by different personnel and have some apparent theoretical differences, but they have more in common than in opposition. "Freud might well be placed in the same relation to Christian dogma as St. Augustine stood in relation to Plato. . . . Even from the strictest philosophical point of view, Freud as a scientist does not contradict the fundamental principles of the descriptive, philosophical psychology of St. Thomas."

The book is written in the graceful but penetrating style for which the brilliant author is famous. One criticism might be that there is a certain unevenness in the gage of the material, so that part of it is very elementary and part of it very advanced. This has the advantage, however, of making it valuable for a wide range of readers, even though in any particular range of readers some of the book will be less interesting.

The author is well qualified to speak for the psychiatrists and the psychoanalysts of the country. Although foreign born, his professional life has been spent largely in this country, where he has long been a leader and teacher in psychoanalysis and psychiatry. His immediately previous book, *A History of Medical Psychology*, is the definitive work in the field of psychiatric history.

Dr. Arthur Ruggles, President of the American Psychiatric Association, writes a gracious and endorsing introduction.

KARL MENNINGER, M.D.

Psychology You Can Use

By William H. Roberts. Cloth. Price, $2.00. Illustrated. Pp. 246. New York: Harcourt, Brace and Company, 1943.

Here is a wealth of information about the physical senses, imagination, perception, feeling and emotion, reflexes, instincts, intelligence, memory and all the other human characteristics which are the psychologist's coin. Of particular interest are the simple parlor and kitchen demonstrations which the reader is urged to carry out to test various statements as they are presented. Most readers past the age of 10, however, will find the author's oversimplified style extremely annoying. Actual example: "When we taste lemonade, we are really tasting only the sweet and sour. We smell the lemon odor. We feel the cold and the wetness. If we add a little carbonated water, we shall get a sting. That sting is pain. A little pain does not hurt."

R. M. CUNNINGHAM JR.

Flying Health

By M. Martyn Kafka. Cloth. Price, $2.00. Pp. 248. Harrisburg, Pa.: Military Service Publishing Co., 1942.

This is a nontechnical treatise on general hygiene addressed primarily to the young pilot. The author, a former U. S. Army Air Corps Flight Surgeon, writes lucidly, and in general his advice is sound. There are sixteen chapters, the first four having to do with general hygiene including physical exercise. The reviewer would take vigorous exception to the author's recommendation of boxing as a form of exercise well suited for young pilots. Boxing should be specifically prohibited as far as fliers are concerned, since even a minor concussion such as may follow a vigorous "left to the chin" may disturb equilibration for hours and sometimes for days. Minor blows on the head also increase susceptibility to low oxygen tension.

The author's discussion of promiscuous sexual relations and the use of alcohol is sound, although pitched at the early high school level. It would be a little more appropriate for a Y. M. C. A. booklet on hygiene than for a serious text on aviation medicine.

The most valuable sections of the book are those on tropical aviation and arctic aviation and a chapter

entitled "Life in Altitude," which contains a brief description of problems encountered in the aerial transportation of sick and wounded. The appendix contains a summary of medical requirements prescribed for a military pilot by the U. S. Army Air Forces prior to the beginning of the present war.

JOHN F. FULTON, M.D.

Tables of Food Values

By Alice V. Bradley. Cloth. Price, $3.50. Pp. 224. Peoria: The Manual Arts Press, 1942.

This book should give the dietitian, nutrition worker, physician and nurse a valuable aid in working out special diets. Probably the homemaker without a knowledge of food chemistry may, after a little study, find it helpful. The book in its various tabulations apparently gives the latest available information concerning the vitamin, mineral and other food value content of specific amounts of practically all commonly, and some infrequently, used foods. Tables of alcoholic beverages are included to aid the dietitian who needs to compute the composition of "drinks" in working out diets. Recipes which accompany food tables add interest and utility. In almost every way the publication is a marked improvement over the earlier edition (1931), although at that time it was the best offering in its field. One's only regret is that in these days of difficult meal planning the housewife does not have this wealth of information.

MIRIAM ZELLER GROSS.

So You Feel Sluggish Today

By Harry Gauss, M.D. Cloth. Pp. 291. Price, $3.00 Boston: The Christopher Publishing House, 1942.

This book is described in the introduction as "at once instructive to the physician and intelligible and therefore helpful to the layman." Assuming that this represents the purpose of the author—to write a book which would be useful both to doctors and their patients, the book may reasonably be evaluated on that basis.

One might count on the fingers of one hand the number of successful books written both for doctors and patients. This book is not among them. It is too technical for the layman and too elementary for the physician. As a matter of fact it is virtually impossible to write a book on most phases of health for both doctor and patient.

The principal objection to this book is its length, which makes it tiresome for the normal lay reader, who would become impatient with the lengthy recital of symptoms and toss the book aside. The hypochondriac on the other hand would find this book exactly what he is looking for, because it will give him plenty of material to worry about. Especially unfortunate is the chapter, "Check Your Symptoms." If the hypochondriac has omitted any symptoms from his worrying list, he will find them here. The chapter on when and how to use laxatives contains a great deal of information which the patient does not need and should not have. Despite the author's frequent and quite proper warnings against self medication, this is a direct invitation to try out the various drugs mentioned and described.

W. W. BAUER, M.D.

Behind the Sulfa Drugs

By Iago Galdston, M.D. Cloth. Price, $2.00. Pp. 174. New York: D. Appleton-Century Co., 1943.

One of the most interesting discoveries in the history of medicine has been that of sulfanilamide and related compounds. The discovery came unexpectedly; the effect was startling. As might be expected, a number of books have been written on the discovery of these and similar-acting agents intended to destroy within the body organisms capable of causing infectious diseases. Some of the books are interesting, some indifferent and even misleading. Dr. Perrin H. Long, in the preface of *Behind the Sulfa Drugs*, asserts, "Dr. Galdston has not only portrayed this story of the search for chemical agents in a manner which is very interesting for all readers, but he has also maintained an accuracy of detail that is refreshing."

AUSTIN E. SMITH, M.D.

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Books reviewed in this section should be ordered from booksellers or direct from the publishers. They may not be secured through HYGEIA or the American Medical Association, unless published by this organization. The following list contains the complete addresses where the publishers mentioned in these reviews may be reached:

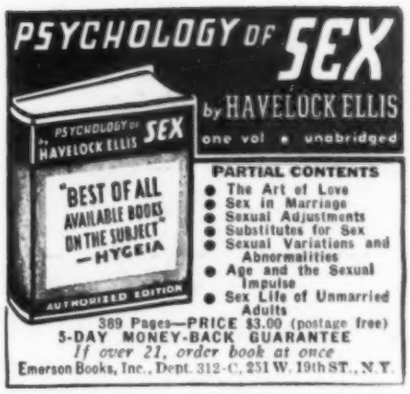
The Christopher Publishing House, 1140 Columbus Ave., Boston, Mass.

D. Appleton-Century Co., 35 W. 32nd St., New York City.

Harcourt, Brace and Company, 383 Madison Ave., New York City.

Manual Arts Press, Peoria, Ill.

Military Service Publishing Company, Harrisburg, Pa.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DISCIPLINE BY MAIL

By DANIEL LE RAY

FOR YEARS, as a physician, I have been hard pressed to help solve the problems that enter into the domestic maladjustments of many of my patients. Every doctor knows that a state of mental distress offers a challenge which often leads to the solution of physical ills.

To my own home there came an emotional disturbance that kept me awake all one night. I had been completely licked by my two older boys. No one knew it better than I. All the reason I could bring to bear had failed. Admittedly defeated, my all night vigil led to a solution of my problem. During those lone hours, spent in disturbed thought, I finally forced myself into the role of physician and away from my father complex, to institute a procedure which has worked so well that I pass it on for what it may be worth to others. This thought has been held in abeyance until now, when my sons have passed beyond the stage of parental discipline.

Twenty-four months separate my two older sons. Years ago they had learned that in unity there was strength, that by sticking together they had a far better chance of carrying their point; so it was father versus two healthy boys. It all began with an argument that had its inception at the dinner table and continued for many hours—just a regular family affair that passed from sound reason to emotional reaction. It ended up by the boys out-yelling me. Reflecting, I wonder now just why I allowed such a natural family misunderstanding to get me down.

Ever since they were old enough to dance, my boys had enjoyed the privileges of the country club. On Saturday nights they had been in the habit of taking young ladies to the dances. Without warning, the board of directors of the club saw fit to discontinue the practice of allowing minors to introduce guests of their own choice into the club without the written permission of their parents. This action, apparently, was taken by the board to give parental control of all guests introduced by their minor children. Receiving notice of this action of the board of directors, I passed it on to my boys. Obviously, this ruling curtailed a privilege heretofore enjoyed that deprived my sons of taking young ladies of their own choice without the knowledge of their parents. However, we discussed the matter and it was understood that the rule would be complied with—there was no other course to pursue. Actually, I had had nothing to do with this ruling, knew nothing about it until it arrived in the mail, so I was in the clear.

Some months later, after I had been out of the city, both boys informed me at dinner one night that they had escorted girls to the club dance without the required written sanction of their parents. They accepted their action as proper on the grounds that the doorman had admitted them without question. So the argument began, my contention being that they were my guests at the club and should not embarrass me by breaking the rules established by the board of governors. Their contention rested on the theory that although such a rule was on the books of the club, it was not being enforced. To emphasize their point they stated that we had absurdly low speed laws but that no one observed them because they were not enforced. So we stood, on opposite sides of the fence, neither side willing to give in, and eventually the argument ended up with an emotional outburst that threatened our mutual respect.

That night I determined on a plan that I have followed ever since. I made up my mind to take all serious arguments away from the table and living room and to settle them by mail. It occurred to me that all emotional reaction could, to a large extent, be eliminated if sound reason had to take its place. To this end, I reasoned that a written statement, factual in character, which demanded an answer to avert a penalty, would answer the problem.

Following this line of reasoning, I went down to my office and wrote the club. An answer from the secretary stated that the doorman was in error in admitting the boys and their guests without written consent of their parents. I enclosed this statement together with my written analysis of the whole case, which is included here as an example of the "discipline by mail" technic which later became a family routine:

"Our conversation of last Sunday night led us into devious paths of thought. Because of this I want to put in writing my position in the matter.

"Let's start and get one thing clear as it relates to the Club. I have been a member of this club before you were born. As minors and at my request you are given the privileges of the club but I am at all times responsible to the club for your actions while you are on the premises. The club has no hold on you except through me.

"A month or so ago I read to you a letter that I had received from the secretary of the club. This letter was perfectly clear to me and I assumed it was to you. During my absence, you both, upon receiving verbal information from the doorman at the club, introduced two young ladies, not members of the club, as my guests. The doorman gave you to understand that the letter sent out by the club was not considered seriously. You accepted the doorman's decision in the matter although it conflicted with your father's interpretation to you of a rule of the club. When you took it upon yourself to investigate an understanding that I had had with you and then came to a decision without my knowledge or consent, you of course assumed full responsibility for your action.

"I realize that boys take liberties with their father, and I also realize that I was not available for immediate action. The principle upon which you both acted did not, in my opinion, ring entirely true. Having been offered the privileges of the club you overstepped my understanding with you and assumed the role of a member.

"I stand ready to receive and give thoughtful consideration to your written contention in this misunderstanding that has separated our mutual interpretation of a definite principle."

This is just a sample, but I have a desk full of letters written to my boys, for I always keep a copy of our communications. This has protected the age-old alibi that "you did not say that" or "we do not remember that." In this and other cases, a reasonable penalty for the breach of discipline was appended. The boys were given the opportunity of replying, and I made it a rule to lessen the penalty or to nullify it entirely if they could convince me, in writing, that they were justified in the position they defended.

Discipline by mail has one difficulty. It takes time, thought and effort. One is on record, once he commits himself to the written word. But, it involves absolute fairness. It eliminates the emotional reaction that so frequently disturbs a family relationship of love, respect and confidence. Bitterness engendered by heated feelings strikes squarely at the foundations of the home.

Discipline by mail has worked in my home in all major controversial matters over which I have had the controlling influence. I do not mean to imply that the boys' mother is eliminated from the picture—far from it, for she still abides by her rightful privilege of verbal dissertation. But if things get too hot, we all resort to written negotiation. It has worked.

BABY CALENDAR

A calendar published recently by the H. J. Heinz Company provides a two year, day by day story of a baby's development and growth. There are charts for important birth data, monthly feeding schedules, height-weight-age tables, immunization records, teething progress and mental-physical development guides. Here and there throughout the pages are many helpful hints for mothers, and beside each date is ample extra space for the individual mother's own "nursery notes."

Any mother can obtain a copy of the calendar through her physician or hospital or by writing direct to the H. J. Heinz Company, Dept. BC-9, Pittsburgh, Pa.

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FOOD, FINGERS AND FLIES

(*Continued from page 503*)

by boiling contaminated water and making it into tea. Chlorination is also effective, and the objectionable taste may be dissipated by allowing the water to stand in an open vessel properly protected from flies. Since the chlorine is volatile it will evaporate overnight, depending on the concentration used, sufficiently to make the water palatable. Another thing to remember is that placing boiled and cooled water in a dirty glass or canteen defeats the purpose you set out to accomplish. Boil the container first, even if you have to do it in the water you are going to drink. If the inside is kept clean after it is once sterilized by boiling, the process need not be repeated except at infrequent intervals. Once a day, fill it with boiling water.

Water is generally the most important problem from a military viewpoint, but the same principle applies to other food. If the food cannot be boiled, it should be washed thoroughly; washing should be followed by scalding with hot water, immersion in chlorinated water or in vinegar, depending on the nature of the food. Leafy vegetables for salads can be rendered safe by thorough washing in running water followed by immersion in vinegar for fifteen minutes, as few of the dangerous germs survive the high acidity.

How about the person who handles the food? No person should be permitted to handle food in military or civilian establishments without initial and regular subsequent bacteriologic examinations of the stools. At military cantonments this should be done weekly, and special measures should be instituted to safeguard the food supply because of conditions peculiar to the military service. Failure to observe these precautions frequently results in outbreaks of "food poisoning." Any food handler with diarrhea should be immediately relieved from duty and not permitted to return until stool examinations prove negative. Procrastination is the great ally of all food infections. In the average American home, the mother should promptly isolate any of her family afflicted with diarrhea, call the doctor and always permit culture of the stool. Isolation is most important during the first few days, when the causative bacteria are present in the intestinal discharges in large numbers and the danger of contagion therefore is greatest. Isolation of a patient means his separation from contact with others, the setting aside of individual eating utensils and linens which should be boiled after use, and the liberal application of soap and water to the hands and toilet seat. Chemical disinfectants or antiseptics are of limited value in that as used by the average person they offer a false sense of security.

"An army travels on its belly" is an old military adage which is as applicable today as in the Napoleonic era. The food supply of an army must not only be adequate but also fit for consumption. It must be protected against disease-carrying food handlers, flies, vermin and rodents. This is particularly true in the tropical and subtropical regions in which our soldiers and sailors are now fighting. It is here that typhoid, dysentery and salmonella infections are particularly rampant and almost always caused by the contamination of water or other food.

Flies, mice, rats and possibly ants are important carriers of these diseases which do not affect the insects or animals themselves. Adequate screening or other mechanical protection and insect and rodent control are extremely important. Rodents are prolific sources of salmonella infection, contaminating food by their excreta. Flies, however, probably hold first place as agents for the spread of bacillary dysentery. It is well known that the incidence of the disease in tropical regions parallels the damp season, which favors fly propagation. It has been shown that the first step in fly control is to kill the occasional flies that survive winter or other unfavorable climatic conditions. Until these flies have had abundant food, they cannot lay eggs. Hibernation of the common house fly takes place inside a hard capsule called the puparium. In this state, the fly can remain alive under unfavorable conditions for a long time. Usually with the advent of warmth and sunshine the pupa develops into a fly in four or five days. It must then feed for two weeks before it can lay its first eggs. This the female proceeds to do in warm, damp or decaying matter. The larvae or maggots hatch out in a few days and become pupae which, in turn, develop into adult insects. It is estimated that one egg-laying female can give rise in six months to more than one hundred and thirty-one quintillions of descendants, if all the eggs laid come to maturity. It has also been calculated that one fly, after feeding on the contents of a spittoon, manure pile or privy, can carry 500 to 6,000,000 bacteria on its body. Flies have the pernicious habit of vomiting just before feeding. They therefore contaminate food in this manner, by defecation or by germs adherent to the hairs

THE CONTROL OF INFECTIOUS DIARRHEA

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5. Isolating every case of diarrhea until cultures for specific organism prove negative.
6. Appointment of an epidemiologist to the staff of every hospital.
7. The prophylactic use of vaccine and serum in bacillary dysentery.

of the legs or other parts of the body.

Dysentery germs ingested by the fly can live in its intestinal tract for as long as five days. The source of contamination need not be in the immediate neighborhood, for flies can travel as far as eight miles in one day. These observations are most important in military areas where the disposal of excreta is often a most perplexing problem. They are equally important in some of our city restaurants where one must go through the kitchen in order to get to the toilet or where flies buzz their merry way from adjoining toilet to the food. Notice how the dishes are washed at your favorite lunch counter or restaurant. Watch the drinking glasses. The proper way to wash eating utensils is by the liberal use of hot water and soap. Health department laws require immersion in hot water containing a detergent for a suitable length of time. Actually, the law is rarely enforced, and mechanical appliances are poorly inspected for efficacy. The human equation is always present, and education of food handlers and some system of reward is often more valuable than mere legislation. This would tend to correct such indelicacies on the part of waitresses as blowing on the tops of salt and pepper shakers in order to clean them or wiping them off with the discarded napkin of a patron—practices actually seen in a large chain restaurant in New York City. Similar instances are multiplied many times in our food stores. If these conditions exist in cities with well organized health departments, what are we to say about summer camps and summer hotels, where inspection is often entirely inadequate, water supply questionable and food handlers almost completely free of supervision? In 1938, there were thirty-seven outbreaks of typhoid, dysentery and gastroenteritis in summer camps and hotels in New York State; in 1939 there were thirty-nine outbreaks. These figures are for a state in which a serious attempt has been made to solve the problem for many years.

Under conditions of actual warfare it is often impossible to carry out preventive measures outlined here because of the rapid movement of troops or for other reasons. There is still another method available. Our Army and Navy personnel are vaccinated against typhoid and paratyphoid but not against bacillary dysentery or the more common salmonella infections. Research indicates the efficacy of antidysentery vaccination in white mice and rabbits, and it is hoped that the opportunity to test typhoid-paratyphoid-dysentery vaccine in human beings on a large scale may soon be offered. There is some indication that the combination of the present typhoid-paratyphoid vaccine with dysentery vaccine provides a favorable form of protection. It has been found that immunity against dysentery is highly "type specific." That is, there are many members of the dysentery family, and vaccination against a Philippine strain does not necessarily afford absolute protection against an African or South American strain. For this reason, vaccines must be prepared from dysentery germs in the area in which a given military force is operating. A special method of rapid preparation is now available, as are dysentery strains which have been collected during the past ten years from various parts of the world, including one hundred cultures received from the Philippines a few weeks before the Japanese invasion. It cannot be said at this time that absolute protection can be assured, but there is sufficient laboratory and clinical evidence to warrant a trial. This conservative statement gains added weight when the dangers of bacillary dysentery are balanced against the comparative harmlessness of such vaccination.

A good deal has been heard about the use of the sulfa drugs. There is no evidence at present of their efficacy in typhoid, paratyphoid or salmonella infections. Sulfathiazole, sulfaguanidine and sulfasuxidine have been used with some success in the treatment of bacillary dysentery, particularly at its inception. They have not been used to any extent for prevention of the disease. The first two drugs are absorbed into the blood and may cause toxic manifestations, and for that reason they cannot be given except under careful medical supervision. Sulfasuxidine, however, remains almost entirely in the intestinal tract and may prove to be a useful prophylactic in dysentery.

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SANITARY REQUIREMENTS FOR SCHOOL LUNCHES

Statement by Joint Committee. 4 pages—10 cents.

American Medical Ass'n., 535 N. Dearborn St., Chicago

Social Hygiene in War and Peace

(Continued from page 489)

The chief procedure which is of value in discovering infectious venereal disease cases is the finding and examining of all contacts of known cases. To accomplish this, the Eighth Service Command originated the Contact History Report, which is required for all venereal cases that are diagnosed in this Service Command. This information is conveyed to the state health officers and the local authorities with a plea that the infected individuals be located and segregated.

Since the origination of the Contact History Reports, every patient with an infectious venereal disease discovered among Army personnel in the Eighth Service Command has been questioned to determine the identity of his contacts during the period when he may have been exposed to the infection. This procedure has resulted in the uncovering of thousands of venereal disease cases among civilians, which cases otherwise would not have been found. Since every civilian patient thus located may and frequently does infect scores of soldiers, the value of tracing infections to their source is incalculable, provided adequate facilities exist for properly handling these cases when found. Through the cooperative efforts of the civilian health authorities substantial reduction in the incidence of venereal diseases in military installations has already been accomplished. No doubt similar reductions in incidence have occurred in the civilian population also, but these are not so easily measured.

As has already been stated, finding the infectious individual is only half the problem, for the identity of the person will serve no purpose at all unless something is done to prevent further transmission of the infection. Provision must be made for the treatment of cases discovered in order to cut short their period of infectiousness. Treatment ordinarily controls the infectiousness of both syphilis and gonorrhea, but in both diseases there is some lapse of time between the beginning of treatment and the end of infectiousness. During this period the patient may still transmit the disease through sexual contact. Some patients may be trusted to refrain from such activities during the period of their treatment, but many will continue to spread infection if given a chance. For these, facilities must be provided in which they can be isolated during treatment, or much of the control effort will be wasted. The lack of adequate isolation facilities is the greatest deficiency at the present time.

An attempt has been made partially to meet this deficiency by the use of jails for isolation purposes. This practice has undoubtedly been of great assistance, but it is far from ideal. The mere fact that the jails are used puts an unwarranted stigma on both the program and the individual. Patients thus held are isolated and treated because they are sick and a menace to the public health and not because they have committed a crime. Consequently, they should be isolated in a hospital rather than a jail. Within the last few months a start has been made in this Service Command toward providing proper isolation and treatment facilities. Many obstacles have been met and laboriously overcome, so that the future, so far as facilities are concerned, appears fairly bright. No efforts in this direction should be spared, as the need is fundamental and very great.

Although the contact-tracing procedures plus isolation and treatment are by far the most important part of venereal disease control, there are numerous additional measures which contribute to the control program. In attacking a problem of this magnitude every available weapon must be used to the limit of its capacity. The chief supplementary weapon available to the military is prophylaxis. The exact contribution which prophylaxis makes to the total program is difficult to determine, but we do know that prophylactic procedures are effective in preventing infection if properly used. The difficulty arises in inducing the men to employ effec-

tively the measures and materials placed at their disposal.

The chief additional weapon available to civilian authorities consists in eliminating undesirable conditions which encourage promiscuity and thus contribute to the spread of the venereal diseases. Just as in the control of malaria it is necessary to clean up the swamps and pools in which mosquitoes breed, so it is necessary in venereal disease control to eliminate as far as possible all centers of commercialized prostitution, since these are inevitably prolific reservoirs of venereal diseases. Until recently, in fact, the prostitute, who has illicit sexual relations for hire, and her trade overshadowed all other factors as a source of infection, but since the application of vigorous repressive measures, the erotophile, who has illicit sexual relations for reasons other than hire, especially of the honkytonk varieties, has usurped the limelight. The War and Navy Departments have made it clear that they regard the control of prostitution in all its forms as an essential part of the program for control of venereal diseases, and in nearly all instances civilian communities in this Service Command have cooperated. While the control of commercialized prostitution is fairly well in hand, not so much can be said for the clandestine type.

Since this is the sensational side of the venereal disease control program, some people may have gathered the impression that it is the whole program, which it is not and can never be. It is an effective and necessary adjunct, but it alone will never eliminate the venereal diseases. The foundation on which all control measures rest is a thorough understanding on the part of the public of the seriousness of the problem and the procedures necessary for its solution. The lack of such a general understanding is evident at the present time. For comparison, if next week 50 cases of meningitis, infantile paralysis or diphtheria should arise in any community, every citizen would be acquainted with the fact and deeply concerned about it. On the other hand, it is a small community indeed which cannot yield at all times at least 50 cases of active venereal disease concerning which the "nice" people and even the local leaders often know little and do less. When public concern over the venereal disease situation is aroused to a degree comparable with that felt for the less common communicable diseases the problem will be quickly and effectively dealt with, and facilities for hospitalization of these sick people will be provided in the same way in which we now provide hospitals for the insane and the tuberculous.

It is difficult to understand why we, as a nation, have so long tolerated these disabling diseases in our midst—diseases which not only have such untoward effect on the infected person but also carry their consequences to so many innocent ones. There are thousands of helpless children who stand as a mute indictment of us for our failure, and there are thousands yet unborn who would call to us from the shadow, if they could, to give them a chance to come into the world free from the ravages of such infections. The presence of venereal diseases among our population is a challenge to all of us—a challenge we must meet, as we have met others in the past, with resolution that they can be eliminated.

SYPHILIS RATE

The rate of prevalence of syphilis for the entire male population of the United States between the ages of 21 and 35 is estimated to be 47.7 per thousand, based on serologic blood test reports of 1,895,778 white and Negro men between those ages who were tested under the provisions of the Selective Training and Service Act of 1940, R. A. Vonderlehr and Lida J. Usilton, Washington, D. C., report in *The Journal of the American Medical Association.* The rate of prevalence of the disease based on positive and doubtful blood tests among the selectees examined is 45.3 per thousand. The rate of prevalence among Negro selectees is 252.3 per thousand, among white selectees 17.4 per thousand. The estimated rate of prevalence for the entire male Negro population aged 21 to 35 is 272 per thousand, for the entire male white population 23.5 per thousand.

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Medical News

OF THE MONTH

Penicillin

Despite the fact that some sixteen companies are engaged or about to become engaged in the production of penicillin, supplies of the substance for the near future will be almost entirely limited to the armed forces because of the great difficulties involved in its large scale production, it is reported in a recent issue of *The Journal of the American Medical Association.*

Penicillin, discovered by Alexander Fleming in London, England, in 1929, is made by a mold known as Penicillium notatum. Research indicates that it may be one of the most powerful weapons yet discovered against certain types of infections.

In a statement released by the Committee on Medical Research of the Office of Scientific Research and Development, A. N. Richards, M.D., chairman, says that "Unless an expansion of production takes place at a greater rate than can now be foreseen, the supply for civilian medical needs in the near future will be exceedingly limited. . . .

"The difficulties which confront large scale production are very great. They arise chiefly from the fact that in the metabolism of the mold only very minute amounts of penicillin are formed and those only after days of growth."

Pointing out that much investigative work is being done more clearly to define the conditions in military medicine in which penicillin will be most useful, its limitations and the most advantageous as well as the most economical methods of its administration, the statement declares that "At the same time intense efforts are being made by manufacturers to expand production to a point at which it may be made available in significant quantities not only for casualties returned to this country but also for our forces overseas."

In another recent issue of *The Journal of the American Medical Association* Wallace E. Herrell, Edward N. Cook and Luther Thompson, Rochester, Minn., report that they found penicillin effective in treating 3 patients with gonorrhea in whom the infection was completely resistant to what might be considered adequate treatment with sulfonamide preparations. They say that this experimental evidence suggests that penicillin should prove effective in the treatment of clinical infections due to the sulfonamide resistant bacteria.

Correct Removal of Fish Hooks

"By all odds the 'push through' method is the best one for the removal of a fish hook in which the barb has gone in beneath the skin," it is advised in *The Journal of the American Medical Association.* "Circumstances can conceivably arise in which it would require pushing the fish hook through a considerable distance by a curved route before the barb emerges from the skin. When this occurs, it would seem better to make a small incision down to the barb before pulling it out backward."

The foregoing was in answer to a question in a recent issue from a physician regarding a statement published in a fishing magazine wherein it was advised that one "take a pair of small nosed pliers, take a good hold on the hook yourself or have some one officiate for you, and yank. . . ."

Blood Donations by War Workers

Industry need not be concerned about the blood donations on the part of war workers having any effect on absenteeism or lowered production, *The Journal of the American Medical Association* explains. *The Journal* says:

"Industrial concerns recently have been apprehensive about the effect of blood donations on war workers. A number of medical consultants to the Industrial Hygiene Foundation have concluded that ill effects need not be expected if standard procedure is followed closely. Although there may be some temporary lassitude on the part of indoor sedentary workers, eligible donors are not as a rule made weaker nor is there greater susceptibility to upper respiratory infections or other complications in the immediate period following the donation. It was the consensus that industry need not be concerned about the matter from the point of view of absenteeism or lowered production."

Paratrooper Fracture

Every now and then, Captain William J. Tobin, M. C., Army of the United States, says in a recent issue of the *Archives of Surgery,* there appears in the literature a name associated with a definite type of fracture because of the latter's frequent occurrence in a certain type of injury. Among these are the "crank" fracture of the lower end of the forearm due to the "back kick" of the crank, the "bumper" fracture of the upper end of the tibia, or inner and larger bone of the leg below the knee, and the "dashboard" fracture of the acetabulum (socket into which the upper end of the thigh bone fits).

He says that in two years' observation of the fractures occurring among the parachute jumpers or "Paratroopers" in training at Fort Benning, Ga., it has been noted that a substantial number of jumpers sustain fracture of the outside margin of the tibia. Fracture of this type occurring alone constitutes about 12 per cent of the total number of fractures. This type of fracture is believed to be relatively uncommon in civilian life. Captain Tobin believes that it occurs frequently enough among parachute jumpers to justify the introduction of the phrase "paratrooper fracture," as it is believed that in no other occupation does this particular fracture occur as frequently.